

SEP 21 1955

SEPTEMBER 1955

CP*

UNIVERSITY
OF MICHIGAN

SEP 20 1955

TRANSPORTATION
LIBRARY

COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



In This Issue

**Wilkes-Barre Wars on
Gas Hogs**

**They're Gonna'
"Railroad" the IC Act**

**Safety Center Pro-
tects Fleet & Driver**

Transportation
TL

1
C73
V.90

MORE POWER for your truck dollar in a DODGE TRUCK

**HERE'S
PROOF!**

Compare features that
mean top performance,
economy, dependability.

21,000 lbs. through 27,000 lbs. G.V.W.	DODGE	TRUCK "F"	TRUCK "G"	TRUCK "I"
Max. Available Horsepower for top performance	202	170	170	182
Horsepower per cubic inch (max. avail.) —accepted measure of engine efficiency	.610	.545	.539	.486
Hemispherical combustion chambers give more energy from regular fuel	Yes	No	No	No
Sodium-filled exhaust valve stems run cooler, last longer	Yes	Yes	No	No
Hydraulic valve tappets for quiet valve operation without adjustment	Yes	No	Yes	No
Twin mufflers and exhausts mean more power, less back pressure	Yes	No	No	No
Twin carburetion standard (3½-ton) for better engine breathing, increased power	Yes	No	No	No
Dual-breaker distributor points give hotter spark for better combustion	Yes	No	No	No

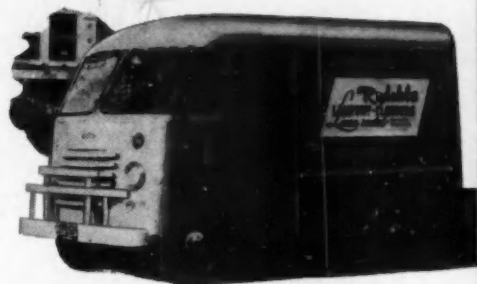
With up to 202 horsepower, Power-Dome V-8 engines give Dodge heavy-duty trucks more power than any other leading make. And these high-performance V-8's are STANDARD in Dodge 2¾-, 3-, and 3½-ton trucks!

There are good Chrysler Corporation-engineered reasons for this extra power—quality features that promise the Dodge truck owner maximum operating economy, less down time, fewer repair bills.

NOW COMPARE PRICE! Most popular models of Dodge trucks carry the lowest price tags of all makes. See your Dodge truck dealer soon!

DODGE
"Job-Rated"
TRUCKS

WITH THE FORWARD LOOK! ➤



LONESOME ARE THE FEW WHO UNDERSTAND DELIVERY ECONOMICS

Perhaps as few as 10% of business executives understand Delivery Economics . . . know that Economy is Low Cost, not just low price. The few put more in and get their investment back through Savings, plus a profit.

Delivery trucks that pass on the street . . . the many dented and corroded bodies, the low bodies that limit and fatigue routemen, the heavy route trucks that cost too much for gasoline, tires, brakes, clutches, springs and body repairs—all are evidence of wasteful buying.

Many body builders and truck dealers concentrate on buyers who mistake low price for Economy, so you have to think for yourself to get Low Cost Deliveries.

We do not pretend to make the most delivery bodies. We do not claim to serve the multitude. Rather, we cater to thoughtful truck buyers who prefer Bodies that Weigh less, Dent less, Corrode less, Depreciate less, Last longer and Pay for Themselves thru Savings. Not perfect Bodies but Better Bodies.

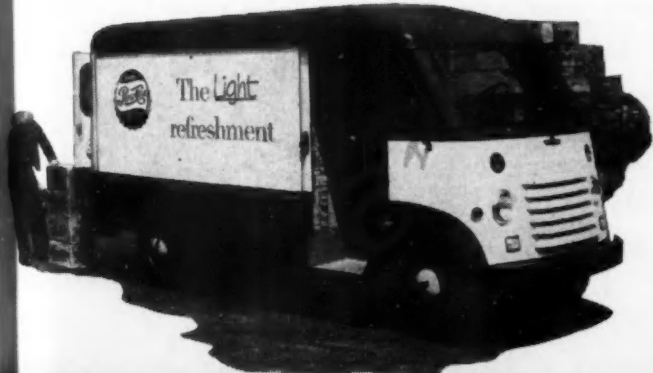
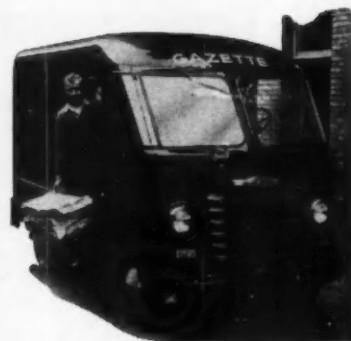
Olson Aluminum Alloy Bodies by Grumman are different in design and construction, different even from those aluminum bodies now being offered by steel-body advocates who are trying to copy our success. The difference is in the Quality, Workmanship and Know-How of Grumman's 27 years of building fighter planes and 23 years of Aerotype Aluminum Body Construction.

Not the lure of cheap prices, nor the promises of quick deliveries, but Lower Operating and Maintenance Costs and Longer Life are what we offer to those who appreciate the Economy of Quality.

Demand has exceeded our growing output for more than 2 years. Therefore, we accept orders in advance through reliable truck dealers.

Our latest catalogue with a concise summary of "Today's Economics of Route Deliveries" will be sent to you on request, to help make '56 a better year.

J. B. E. Olson Corporation
1740 Broadway, New York 19, N. Y. COLUMBUS 5-4300



COMMERCIAL CAR JOURNAL

EDITORIAL STAFF

Murray K. Simkins Managing Editor
Jack Colgan Assistant Editor
Ernest S. Forest Assistant Editor
Joseph Geschelin Detroit Tech. Editor

Leonard Westrate Detroit News Editor
R. Raymond Kay Pacific Coast Editor
Howard Kohlbrenner Art Director
George Baker, Ray M. Stroupe, Neil R. Regeimbal..... Washington News Editors

Charles Bartlett Rawson, Editor

Marcus Ainsworth Statistician
Paul Wooton Washington Member
of the Editorial Board

THIS MONTH'S FEATURES

Trucks Build the Highways66

The story of the truck fleet that builds and maintains the roads used by the nation's 58 million vehicles.

Indiana Public Service—Tops in Shops68

L. L. Clark, Transportation Superintendent for Indiana Public Service, lists four ways his new shop has cut costs.

Do Road Calls Measure PM Efficiency?71

They can be misleading when used as a comparison between fleets says Wilkes-Barre Transit's Allen Coolbaugh.

Wilkes-Barre Wars on Gas Hogs72

Reduced engine idling, changes in muffler design, careful ignition PM helps this bus fleet cut fuel costs.

They're Gonna "Railroad" the IC Act74

Special analysis shows changes proposed in federal regulation affecting private and for-hire motor carriers.

Air Breakaway Systems76

In an SAE report, Homer T. Seale describes seven presently available units providing emergency air brakes.

1955 Highway User Legislative Roundup80

A concise summary from the National Highway Users Conference of new state laws affecting truck and bus fleets.

Divco Offers the "Dividend"87

It's a new forward-control, multi-stop delivery truck for dry freight designed for 8000 to 12,000-lb GVW.

Aluminum Enters the Dump Body Field89

Builders have selected aluminum for dump bodies to take advantage of its weight saving possibilities.

West Coast Safety Center Protects Fleet90

This cooperative venture sparked by the Washington Motor Transport Assn. also helps the driver do a safer job.

DEPARTMENTS

The Overload	5
At your Service	9
Up Front with CCJ	17
Dates and Doings	22
Bulletin Board	62
Laugh It Off	64
Shop Hints	78
New Product Descriptions	84



Despite the temporary collapse of the vastly expanded federal highway building program (page 5, this issue), highway construction and maintenance will be bigger this year (\$6.4 billion) and in 1956 than ever before. Without the mighty trucks of the highway construction fleet it couldn't be done—we'd all be stuck in the mud. For a discussion of what these trucks are and what they do, see "Trucks Build the Highways", beginning on page 64, this issue.

EPA

NBP

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

Reg. U. S. Pat. Off.

Member B.P.A.

RUSSELL W. CASE, JR., Publisher

E. H. MILLER, Adv. Mgr.

E. W. HEVNER, Cir. Mgr.

C. W. HEVNER, Asst. to Publisher

JOHN W. FLOOD Research

COMMERCIAL CAR JOURNAL is published monthly by Chilton Co., N. W. Cor. Chestnut & 56th Sts., Philadelphia 39, Pa. Subscription price: United States and Possessions, \$3.00 per year; all other countries \$10.00 per year. Single copies 50¢, except Apr. and Nov.—\$1.00. Accepted under controlled circulation at Philadelphia, Pa.

REGIONAL MANAGERS

CURTIS F. MOSS, Chicago
H. M. WERTZ, Chicago
WILLIAM P. SAUNDERS, Cleveland
ROBERT N. CAIRD, JR., New York City
E. E. ELDER, Detroit
J. A. LAANSMA, Detroit
R. J. BIRCH, San Francisco
FRANK W. MCKENZIE, San Francisco
L. H. JACKSON, Los Angeles

OFFICES

Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone Granite 4-5600
New York 17, N. Y.—100 E. 42nd St., Phone Oxford 7-3400
Chicago 1, Ill.—Rm. 916 London Guar. & Accident Bldg., Ph. Franklin 2-4243
Detroit 2, Mich.—1015 Stephenson Bldg., Phone Trinity 5-2090
Cleveland 14, Ohio—730 National City Bank Bldg., Phone Cherry 1-4188
Washington 4, D. C.—1091 and 1093 National Press Bldg., Phone Executive 3-9474
San Francisco 4, Cal.—300 Montgomery St., Phone Douglas 2-4393
Los Angeles 5, Cal.—3156 Wilshire Blvd., Phone DUNKirk 7-2119

SEPTEMBER 1955 VOLUME XC, No. 1
Copyright 1955 by Chilton Company (Inc.)

.76
esently

You and the AGA—EEI92
Here's how utility fleet men work together to solve their special problems. It could be used by other vocations.

.80
Con-
fleets.

High Additive Oils and Modern Engines94
They cut deposits and wear says Gulf Oil's William A. Howe. He also adds some data on multi-viscosity oils.

.87
or dry

Fruehauf's New "4000" Aluminum Van96

Old Factory Becomes Modern Fleet Garage...96

Great Dane's "Greater Cube" Trailer98

.89
o take

"Empire" Front-Axle-Drive Delivery Truck.....98

International's 3½-ton GVW 4x4 Truck100

Montpelier's Plastic Milk Delivery Body100

.90
Motor

GM Stages a "Powerama" in Chicago106

Dragline System Cuts Trailer Loading Time ...188

ITS

. 5
. 9
. 17
. 22
. 62
. 64
. 78
. 84

Fleetman's Library 88
September News Roundup102
New Truck Registrations104
Fleet Course Calendar130
Among the States180
Introducing236
Fleet Notes236
Safety Awards238
Factory Flashes 241



One of the Publications Owned by
CHILTON COMPANY (INC.)
Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors

JOSEPH S. HILDRETH, Chairman of the Board
G. C. BUZBY, President
Vice-Presidents

P. M. FAHRENDORF
WILLIAM H. VALLAR, Treasurer
GEORGE T. HOOK
TOM C. CAMPBELL
L. V. ROWLANDS
MAURICE E. COX
FRANK P. TIGHE
HARRY V. DUFFY
JOHN BLAIR MOFFETT, Secretary
ROBERT E. McKENNA
IRVING E. HAND
EVERIT B. TERHUNE, JR.
RUSSELL W. CASE, JR.
J. C. HILDRETH

San Francisco

-4243
8-3474

, 1955

COMMERCIAL CAR JOURNAL, September, 1955

To a fleet maintenance chief
who has to "keep 'em rolling"!



Here's Hygrade's pump with the "never-say-die" diaphragm

Nobody has to tell *you* that it's the diaphragm that makes or breaks a fuel pump. You've seen too many perfectly good pumps fold up after only a few thousand miles because the diaphragm "went".

Here's HYGRADE's solution — the one-piece, non-corrosive *Monoflex* diaphragm that *lasts for the life of the pump*. And it's not just the rugged material in it that makes *Monoflex* the longest-lived diaphragm on the market—it's also the way it's fitted. The diaphragm is so tightly sandwiched between the smooth casting surfaces that not even the *smell* of gas can escape.

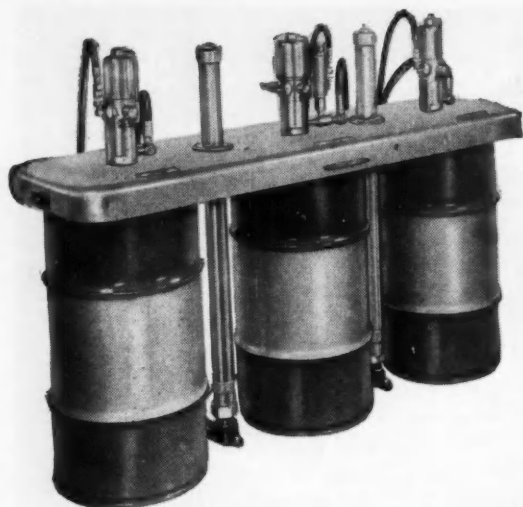
Its great diaphragm isn't the only reason for this HYGRADE fuel pump's popularity with fleet men. For instance, the rocker arm is heat-treated for extra strength and minimized wear. And its valve springs are phosphor bronze, oil-treated, remain perfectly elastic.

Write our engineering department for complete details. That's HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., 37-18 Northern Boulevard, Long Island City 1, New York

HYGRADE



Carburetor Kits • Fuel Pumps & Kits • Speedometer Cables & Casings



**Alemite profit-packed
combination
HANDLES LUBE JOBS
30% FASTER!**

"HOIST" ALEMITE

powered with the sensational new Super-H Pump!

OVERHEAD HOSE REELS

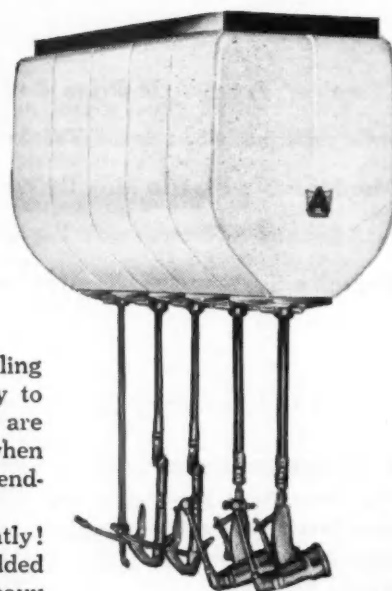
with easier to use meters!

- You Can Pipe Lube Direct to Overhead Reels or Pits, from Original Drums at Remote Installations!
- Make Drum Changes Cleanly, Quickly, Effortlessly!
- You Can Feature Attractive Visual Display of Your Own Branded Lubricants in the Lube Bay!
- Overhead Reels Use Wasted Ceiling Space!

Here's how to speed sales, increase volume, step up profits—with this completely modern Alemite lubrication equipment! Three air-operated pumps are mounted on a pneumatic hoist: Just open the air valve, and all pumps raise as a unit. Change drums, close valve, and assembly lowers smoothly! Over-all cover in gray baked enamel finish protects lubricant from contamination. Delivers chassis and two fluid lubricants (gear lube, automatic transmission fluid, or motor oil) from drums direct to reel hose assemblies.

Overhead Hose Reels put wasted ceiling space to work for you, make it easy to handle more jobs in less time! Hose are kept handy, clean, yet out of the way when not in use. Reel Mechanism locks dependably at desired hose lengths.

Meters give accurate reading instantly! *Flexible*—additional reels may be added at any time. *Durable*—shields are heavy gauge steel finished in gleaming baked enamel. Protects hose from wear—cannot pinch, rub, bind. All reels specially designed for easy installation.



Pump Control Panel (7726-B) mounted on lubrication department wall gives finger-tip control of air operated supply pumps. Electric cord, tube fittings included.



30% More Power Where It Counts . . . with SUPER "H" PUMP! Alemite exclusive PRESSURTROL provides perfect pump control. *Immediate* pressure for handling today's tough, long lasting greases. Ideal for piped installations! Exclusive sealed air motor guaranteed for 27 months!



ALEMITE

REG. U. S. PAT. OFF.

Dept. D-95, 1826 Diversey Parkway, Chicago 14, Illinois



The

OVERLOAD

E D I T O R I A L C O M M E N T

Who Killed Cock Robin?

WHEN CONGRESS adjourned early last month trucking interests did a quick double take. On one count they breathed a deep sigh of relief that the Fallon highway bill, with its huge new truck tax provisions, was dead. At the same time they came face to face with the argument that "truck lobbyists" had scuttled the much-needed highway program.

As newspapers and magazines plastered this charge across the nation, there could be no denying that it was a severe blow at good public relations for the truckers. And the news men had good evidence. Speaker of the House Sam Rayburn himself had pointed the finger of scorn against the truck interests.

In reality, the highway program was scuttled by politics, not the truckers. In a nutshell, and without partisan prejudice, here's the inside Washington story.

The President's initial highway program, often referred to as the \$101 billion plan, was a good one. It included the much-debated bond financing idea patterned along lines which have worked out extremely well in smaller doses—such as the \$273 million program in the city of Detroit.

The only real trouble with it was the fact that it was a Republican program and in Congress, control rests with the Democrats. Many individual Democrats liked the plan immensely. But the way Washington politics are set up, it would have been political suicide for the Democrats to sponsor a Republican bill. Undoubtedly it would have worked out the same way had the shoes been on opposite feet.

So the Democrats were forced to come up with an alternate plan and the pay-as-you-go idea has great popular appeal. The trouble here was

that neither Democrats nor Republican members dared to stick their constituents with an across-the-board tax program big enough to meet the needs of even a watered-down new highway program. Finally, someone came up with the idea that trucks could make up the difference.

Just how much the trucks would have paid makes fascinating reading. CCJ's Washington staff dug up the facts just in time for our latest news page last month (pg. 17). In case you missed it there is one paragraph that bears repeating.

"Tax increase under the Fallon Bill would amount to \$12.4 billion in 15 years of which trucks and buses would foot \$6 billion or 48.7 per cent. Of the total highway tax funds, trucks and buses would pay 52.3 per cent. The largest vehicles (8.5 in. tires and up), representing only 1.2 per cent of all vehicles, would pay 25 per cent of new taxes."

Under the circumstances truck interests had no other alternative than to kill the bill. They did the job well both through lobbyists and with more than 5000 letters from the grass roots. But it was a purely negative job that had to be done in a crisis.

Now, with the heat off and Congress in recess, there is a golden opportunity for the industry to seize the positive initiative. Suppose that twice those 5000 letters were addressed to Congressmen at home. Suppose each of them urged that a second look be given to the bond financing plan, or, if you think better, to an across-the-board tax increase. In any event all of them should point out that the industry *wants* and is willing to pay for an expanded highway program under a fair and equal cost allocation.

Won't *you* give it some serious thought?

Bart Rawson
Editor

TAKE THE ROAD

WITH *Texaco Marfak* as your chassis lubricant, you can be sure of low maintenance costs and give bearings extra protection at the same time. *Texaco Marfak*—the world's most famous chassis lube—defies wear and rust, won't jar or squeeze out of bearings, no matter how rough the going. That's why you'll stay on the road longer between overhauls, get longer life from chassis parts and keep costs down.

In wheel bearings, use *Texaco Marfak Heavy Duty*. It stays where you put it—in the bearings—and forms an effective seal against dirt and moisture. Thus, its vital protection lasts for thousands of extra miles. And no seasonal change is necessary.

MORE THAN 555 MILLION POUNDS OF TEXACO MARFAK HAVE BEEN SOLD
To get dependable, economical engine performance, lubricate with *Texaco D 303 Motor Oil HD*. Especially refined for heavy duty service, it keeps engines clean, rings free, valves seated properly—assuring longer parts life, full power, minimum fuel consumption.

By lubricating transmissions and differentials with *Texaco Universal Gear Lubricant EP*, you assure smoother operation, longer gear life.

Let a Texaco Lubrication Engineer help you get greater efficiency and economy through effective lubrication. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TUNE IN . . .
TEXACO STAR THEATRE
starring
JIMMY DURANTE
on television . . .
Saturday nights, NBC.



TEXACO

ccj



At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by MURRAY SIMKINS Managing Editor

Brake Lining Break-in

CHEVROLET Service News cautions drivers against making severe brake applications immediately after drums have been reground. It is stated that abuse of the brake before the lining has had a chance to break in may result in a pronounced pull to one side or even smoking if the application is prolonged. Chevrolet suggests that the brakes be applied moderately until they are smoothed in and cured on the surface. This will keep heat down and will eliminate the possibility of grabbing which results when the resins are brought to the surface through overheating.

A.P.I. Engine Oil Grades

HERE IS HOW the American Petroleum Institute classifies engine oils. A review of definitions may be helpful to fleetmen who are rechecking their oil purchasing practices.

"Service MS—Service typical of gasoline or other spark ignition engines operating under unfavorable or severe type of service conditions, and where there are special lubrication requirements for deposit or bearing corrosion control, due to operating conditions or to fuel or to engine design characteristics.

"Service MM—Service typical of gasoline and other spark ignition engines operating under moderate to severe service conditions, but present problems of deposit or bearing corrosion control when crankcase oil temperatures are high.

"Service ML—Service typical of gasoline and other spark ignition engines operating under light and favorable service conditions, the engines having no special lubrication requirements and having no design characteristics sensitive to deposit formation.

"Service DG—Service typical of diesel engines in any operation where there are no ex-

ceptionally severe requirements for wear or deposit control due to fuel or to engine design characteristics.

"Service DS—Service typical of diesel engines operating under extremely severe conditions or having design characteristics or using fuel tending to produce abnormal wear or deposits."

Brake Lining Wear Variation

GEORGE OETZEL, of Warner Electric Brake and Clutch Co., outlined some of the factors responsible for the wide variation in the wear rate of brake linings when he appeared on a panel at the SAE Summer Meeting. He said that there is just one fundamental reason for the wide variation in the life of brake linings. It is: Variations in interface temperatures caused by Work-Rate and Work-Done per square inch of active drum surface. So, our analysis must begin with examination of the factors which cause Work-Rate and Work-Done to vary.

These are: the Driver, weight distribution, brake torque and working drum area and its distribution, synchronization, or timing and rate of build-up of the various brakes, maintenance and adjustment, character of terrain and nature of service.

While Work-Rate and Work-Done cannot be separated entirely, Work-Rate is often the more important as it is the principal factor in causing high surface—or interface—temperatures and it is surface temperature, more than anything else, which does the damage. At a low Work-Rate it takes a lot of Work-Done to raise the interface temperature high enough to be damaging while the outside of the drum is still cool enough to put your hand on it even when Work-Done is low. The combination of high

(TURN TO NEXT PAGE, PLEASE)

more miles per dollar!



Bendix

ELECTRIC FUEL PUMP for trucks, buses and passenger cars

Learn more about this new and improved fuel pump.
Write for descriptive folder and specifications.

WRITE DEPARTMENT B

*REG. U. S. PAT. OFF.

ECLIPSE MACHINE DIVISION
ELMIRA, N. Y.



Bendix* Electric Fuel Pump

Bendix* Folo-Thru Starter Drive

Stromberg* Carburetor



At Your Service

Continued from Page 9

Work-Rate with a lot of Work-Done is very destructive.

The driver is a very important factor in comparing wear on two identical vehicles, loaded the same, and operating over the same run. Some drivers use their brakes more often (Work-Done) than others; some use them harder (Work-Done) yet both may make the same schedule with the same load, on the same run. Then corresponding brakes on the two vehicles must be compared.

Weight distribution, static and/or dynamic, may cause more frequent lock-up—or "slip-slide"—on one wheel than on another. The greatest brake wear will be on the doing the least lock-up or slip-slide, and the greatest tire wear on the other wheel.

Distribution of brake torque and working drum area may cause differences due to design factors. In other words, different brakes on a single vehicle may not be designed to work at the same rate per square inch of active drum surface. This will show up between axles, rather than between brakes on the same axle.

Variations in the time a brake begins to go to work, or in its rate of build-up, or both, will cause differences in Work-Rate and Work-Done. This will usually show up between axles, or between units of a combination.

Maintenance and adjustment may affect timing and/or rate of build-up, but is possibly more apt to be the main factor in differences of wear between the two brakes on the same axle.

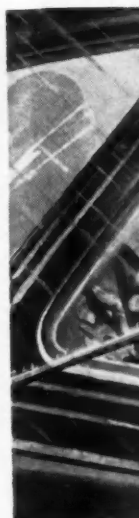
Lastly, hilly country and heavy loads—or overloads—especially when coupled with high speeds, can aggravate all of the above factors. Nature of service may also include frequency of brake application as an important factor in maintaining interface temperatures high enough to cause rapid wear.

Flux Tips Off the Welder

GIVEN A WELL-CLEANED, fluxed surface to work on, silver brazing alloys will wet easily to produce strong, leak-tight joints. Flux helps the molten alloy wet metals by reducing surface tension and by removing and inhibiting oxidation. But unless the flux itself wets the metal initially, there is little chance that

(TURN TO PAGE 12, PLEASE)

Wh spe sea



AIRFOA
build,
over w
AIRFOA
to ever
helps
alert o

For great

7

We think you'll

COMMERCIAL

Why it pays—BOTH WAYS—to specify Airfoam cushioned seating in all new equipment



AIRFOAM HELPS KEEP DRIVERS ON THE BEAM—

AIRFOAM conforms perfectly to any driver's build, fills body hollows — firmly supports *all over* with gently cradling uplift. And because AIRFOAM contains over half a million air cells to every cubic inch, it stays cool, fresh, resilient, helps keep drivers comfortable, relaxed and alert on even the longest, toughest runs.



AIRFOAM SAVES MONEY ON SEAT REPAIRS AND REPLACEMENTS—

150,000 miles and more without a repair or replacement of cushioning or cover is not at all unusual for full-depth AIRFOAM truck seats. That's because AIRFOAM is molded *one-piece*—there's nothing in it to sag, snag, break down or come apart! This is easier on seat covers, as well as drivers, so you gain ALL ways!

Goodyear, Automotive Products Dept., Akron 16, Ohio

For greatest comfort, longest wear, specify

full-depth Airfoam seats

and backs!



All truck manufacturers can supply it!

Airfoam MADE ONLY BY **GOOD YEAR**
THE WORLD'S FINEST, MOST MODERN CUSHIONING

We think you'll like THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

Airfoam—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Stay in the economical RPM range
of your **DIESEL ENGINE!**

Get maximum efficiency
longer engine life

for BUSES • TRACTORS
TRUCKS

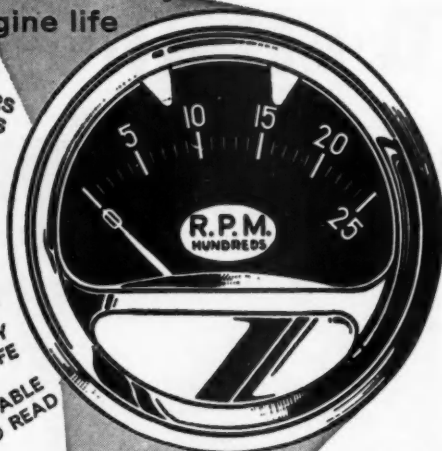
EASY TO INSTALL
NO DRIVE CABLES

6, 12, or 24 VOLT
ILLUMINATION

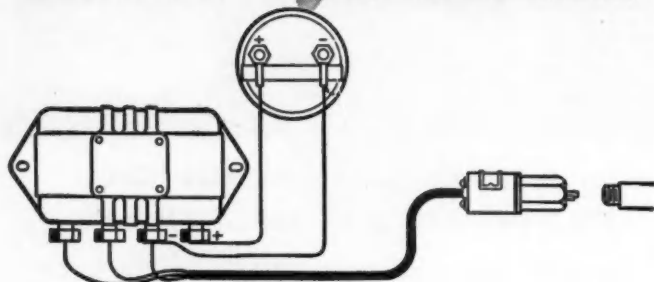
SELF-POWERED
NO BATTERY DRAIN

HIGHEST ACCURACY
LONGEST SERVICE LIFE

RUGGED, DEPENDABLE
EASY TO READ



with new **Sun**
MECHANICAL DRIVE
ELECTRIC TACHOMETER!



Now, New Sun Mechanical Drive Electric Tachometer for diesel engines gives consistent, more accurate RPM readings for greater diesel efficiency and economy!

Operation is simple and foolproof. The new Sun Power Units are available for standard S.A.E. drive ratios—and S.A.E. mechanical drive outlets. Troublesome, long drive shafts are eliminated. The Sun Transmitter Unit attaches to any S.A.E. mechanical drive outlet where electrical impulses are picked up and transmitted to the Power Unit and then relayed to the "Tach" head in terms of RPM.

YOU GET GREATER ECONOMY . . . HIGHEST ACCURACY—with SUN! "Tach" Head has illuminated dial with adjustable arrows to indicate safe, economical RPM range! Jeweled D'Arsonval movement, Alnico magnet and rugged double bridge construction gives accuracy to 2% of full scale AT ALL ENGINE SPEEDS!

CLIP THE COUPON—MAIL TODAY! Complete information will be sent immediately.

for greater
GASOLINE ENGINE
economy . . .

SUN
ELECTRIC
TACHOMETER



SUN
DRIVING
GAGE



for passenger cars

SUN ELECTRIC CORPORATION

Tachometer Div.
6359 N. Avondale, • Chicago 31, Ill.

Please send me complete information on:

- ☐ SUN Mechanical Drive ELECTRIC TACHOMETER (DIESEL)
☐ SUN ELECTRIC TACHOMETER (GASOLINE ENGINE)
☐ SUN DRIVING GAGE

NAME _____

ADDRESS _____

CITY _____ STATE _____



At Your Service

Continued from Page 10

the brazing alloy can do so. (This does not apply to the special alloys developed to silver-braze copper without flux.)

Flux is compounded to remove a certain amount of metal oxides, and contains a wetting agent to help break up thin films of oil such as are commonly encountered on mill supplied materials. However, when the accumulations of dirt, grease, oil and oxides become excessive, they can retard wetting by both the flux and alloy. Consequently you can often predict if the brazing alloy is likely to wet by examining the way the flux adheres to a surface.

To illustrate this point, technicians at the engineering laboratory of Handy & Harman, manufacturer of silver brazing alloys and fluxes, took a thoroughly oily steel plate which has been lying around the shop. They cleaned and degreased one-half of the plate; the other half they left intact. They then applied standard flux to each half.

There was an even coating of flux on the cleaned half, flux-less islands on the oily half. If brazing were attempted on a piece in the latter condition, the alloy would wet so sparsely that a mechanically weak and probably leaky joint could be expected. If the flux wets poorly, the wisest and most economical thing to do is to clean and degrease the pieces before attempting to braze them.

The usual cleaning procedure is: Degrease in a vapor degreaser or suitable solvent. Then remove any oxide by pickling or by touching the piece to an abrasive belt or wheel. When handling cleaned parts, do not touch the joint faces; a greasy finger print is as much of an offender as a patch of oil or oxide.

Mack Rocker Arm Lubrication Tip

A DIRECTOR of the Engine Rebuilders Association reports the following suggestion for improving oil distribution on Mack EN510A and EN707A models:

We have found, through past experience, trouble developing in rocker arm assemblies on Mack engines, Models EN510A and EN707A, etc., was primarily due to inadequate oil lubrication and distribution; which was causing problems such as valve trouble, rapid wear on rocker arm bushings and rocker arm shafts.

(TURN TO PAGE 14, PLEASE)

OUT O

IT'S A
CHEWE
TYPE
GUESS
TOOK
KIND
WHEN
DR



B
New L

This is the
produced, c
logging, m
strength can
bruise it th
breaking th
life for m
Claw tread
that of sta
compounde
chipping a
Flexlok pr
from the ru
sible, thus
violent flex
performanc

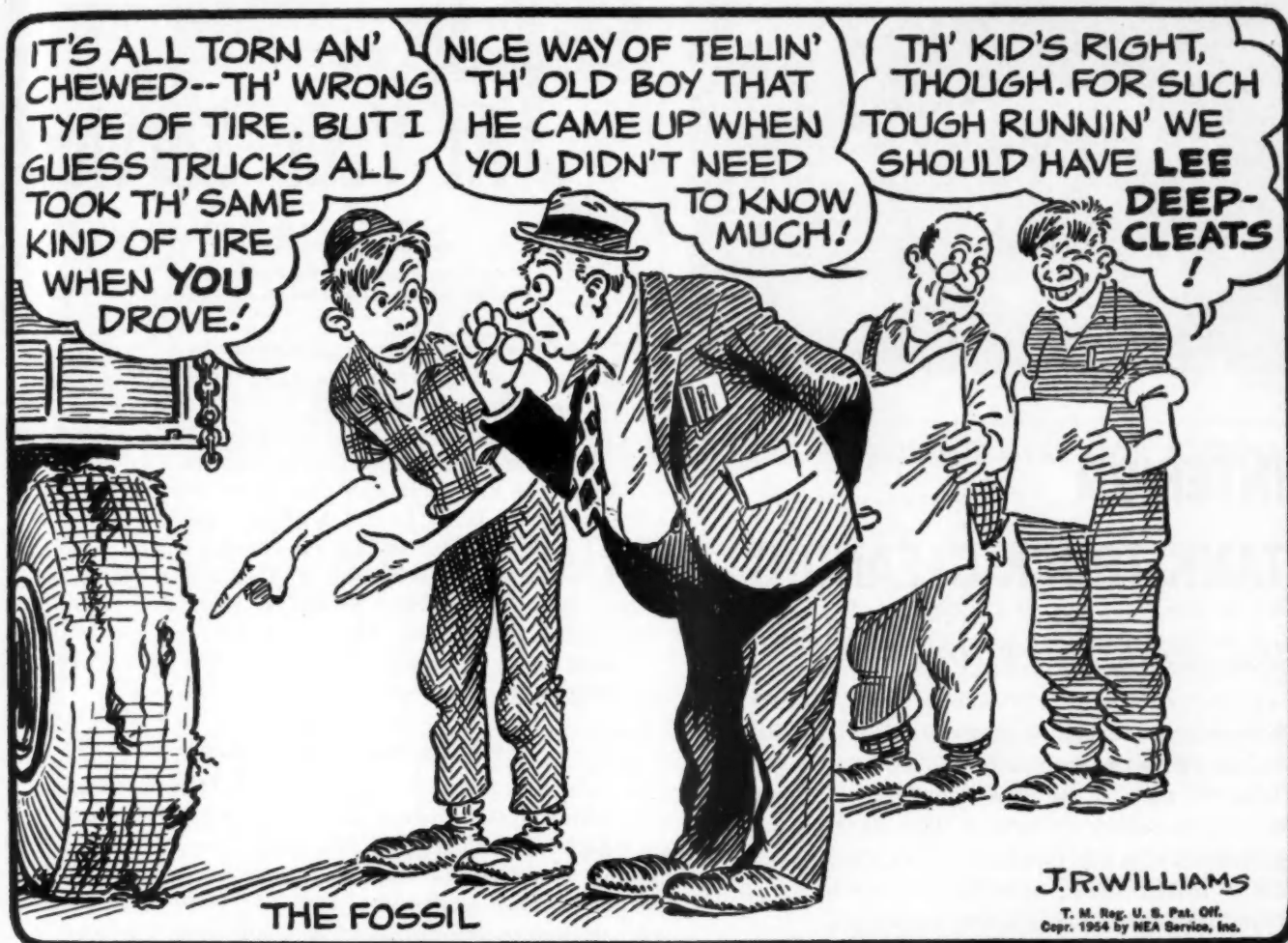
Available

LEE R

COMMERCIAL

OUT OUR WAY

BY J. R. WILLIAMS



BRUTE STRENGTH FOR BRUTE JOBS

New Lee Super DeLuxe Deep-Cleat will handle 'em with ease!

This is the strongest tire Lee has ever produced, designed especially for use in logging, mining, quarrying. The brute-strength carcass is so tough no impact can bruise it through without first bending or breaking the wheel or rim — gives longer life for multiple recaps. The Cushion-Claw tread is about 60% deeper than that of standard highway tires and is compounded for incredible resistance to chipping and tearing. Lee's exclusive Flexlok process makes cord separation from the rubber bond practically impossible, thus providing super resistance to violent flexing. Here's peak off-the-road performance for drivers old and young!

Available with All-Mylon or Rayon Cord

FREE!

8½" x 11" J. R. Williams color-cartoon shop posters . . . promoting correct truck-tire maintenance. You'll get a new one every month . . . order as many copies as you need.



Lee Rubber & Tire Corporation
Conshohocken, Pa.

Please send me each month for six months _____ copies of the current J. R. Williams tire-maintenance poster. Send also catalog information about Lee Tires for _____ (type of service)

Company _____

My name _____

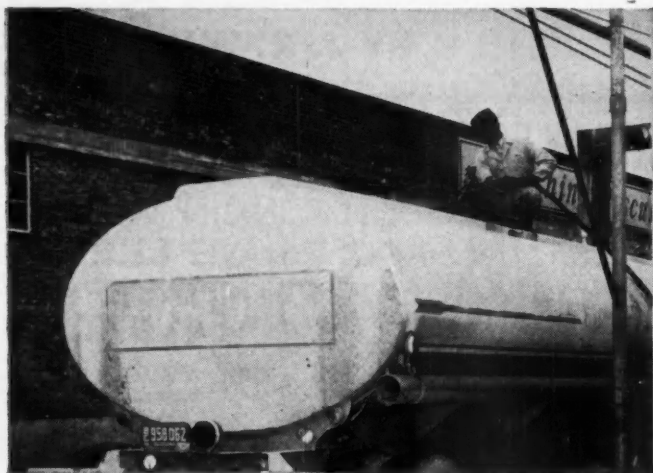
Street _____

City _____ Zone _____ State _____

Please attach coupon to your company letterhead

LEE RUBBER & TIRE CORPORATION • CONSHOHOCKEN, PA.

COMMERCIAL CAR JOURNAL, September, 1955



INTERIOR TANK TRUCK CLEANING...

the long and short of it—

Some tanks are baffled, some are open. That's why Oakite offers two unique methods of cleaning them. Take the man in the above illustration. He's using the Oakite Rotary Sprayer to clean three inside compartments of a gasoline tank. The Rotary Sprayer is easily moved about, provides a hard-hitting spray from 6 jets that really blasts soils loose.

What about open tanks? That's a job for the new Model 531 Interior Tank Cleaning unit illustrated at right. This truly unique unit operates on a mechanically controlled cycle that provides powerful cleaning, inch by inch. Four specially designed spray jets move in a vertical and horizontal pattern making possible complete big-tank cleaning at low cost.

Regardless of what your tank trucks carry, there's an Oakite way to clean them, that's fast, safe, thorough and economical. Want details? Write today to Oakite Products, Inc., 26D Rector Street, New York 6, N. Y. for free literature.



Technical Service
Representatives in
Principal Cities of
U.S. and Canada



At Your Service

Continued from Page 12

To remedy these factors the first step we took in rebuilding these rocker arms was to rebush the rocker arms and drill the oil feed holes in these bushings from the original size to 5/32 in. in diameter, and fitting the rocker arm bushing a trifle looser to the shaft. Still this did not seem to be the perfect solution to our problems, so our next and final step was to cut a groove 1/8 in. wide and 1/64 in. deep extending around the center of the bushing and also keeping in line with the oil feed holes.

The performance of these operations have proven quite satisfactory in solving our oil distribution problems in this type of rocker arm assembly.

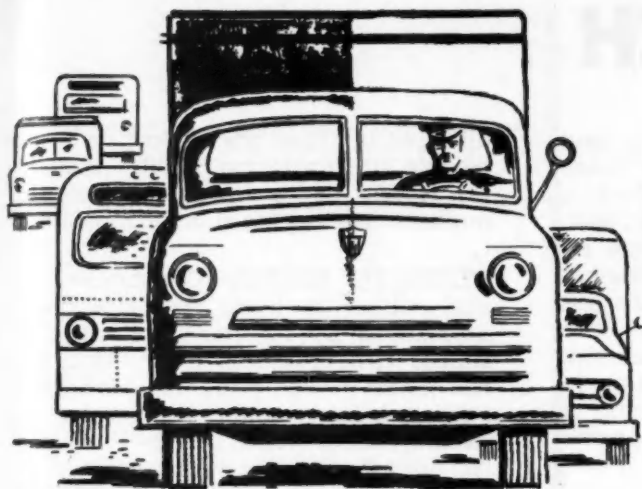
What's New in the Industry

In a recently introduced **high frequency ignition system**, the interrupted primary current normally dissipated through the condenser in conventional circuits, is converted into high frequency oscillations and fed back into the secondary by means of a Tesla coil. The system developed by Holthouse High Frequency Ignition, Inc., is little larger than the standard ignition coil and can be installed in its place. It is said to provide for greater output energy with resultant better combustion.

A new **hydraulic starting system for diesel engines** built by the Allison Division of General Motors is called the "Hydrostarter." The system consists of a hydraulic motor, a piston type accumulator, an engine driven pump, a reservoir and manual pump. It provides high static torque, 80 ft lb at 3000 psi working pressure. The compact motor extends slightly more than 9 ins. from the engine flywheel housing and can be installed by the average mechanic. It can be coupled to practically all Diesel engines up to 300 hp in the same way as a conventional electric starter.

A "sun powered" model automobile, believed to be the first ever built, was demonstrated at the General Motors Powerama in Chicago. The 15-in "sunmobile" has 12 photoelectric cells which convert light into electric current. The current powers a tiny electric motor which propels the car. The photoelectric cells are made of selenium, an element which has the property of converting light into electric power.





UP FRONT

WITH CCJ

SEPTEMBER, 1955, FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE Truck freight for the first six months of this year, as measured by reports from ICC Class I motor carriers of general freight, is up 14.2 per cent compared to the first half of 1954. American Trucking Assns. President Neil Curry says the industry expects to do as well during the third and fourth quarters of 1955. The six-month tonnage figure for 1955, according to ATA's Research Dept., was 25 million tons as compared to 22 million tons in the first six months of 1954. The tonnage gain was registered despite strikes in the Pacific, Rocky Mountain and New England regions.

TRUCK TONNAGE in the event of an all-out war is expected to drop from 195 billion ton-miles in the first year to 170 billion ton-miles in the third. This estimate is contained in a report now being considered by the Office of Defense Mobilization. It was prepared by a joint railroad-shipper committee appointed to forecast railroad equipment needs under national emergency conditions. The committee based its tonnage estimates on the premises that in the event of an all-out war civilian truck production would be cut and fuel rationing would curtail fleet operations. But . . .

IT WAS TRUCKS to the rescue when flash floods caused by hurricane "Diane" hit parts of Pennsylvania, New Jersey, Connecticut, Massachusetts and Rhode Island last month. In the first hours of the deluge, it was rescue work with trucks serving almost like ferry boats in taking people to higher ground. Second stage was bringing in emergency supplies. Biggest need in many places was drinking water with tank trucks doing never-ending shuttle service. Also by truck came food, medicine, generators, clothing and the like. Third stage for the trucks was the reconstruction—restoring of normal truck service to bring in the multitude of supplies needed, dispatching of utility crews to restore water, electric, gas and phone service, organizing of dump truck fleets to clean out the debris. A fine example of how trucks serve the people in a national emergency.

CHICAGO, AUG. 30 We have just previewed the fabulous General Motors Powerama being held on Chicago's lake front. It is open to the public through Sept. 25. Truly an eye-opener in power progress, the 250 exhibits cover everything from trucks and buses to railroad trains, jet airplanes and a submarine. Full details of the \$7 million show begin on page 106, this issue. Commercial Car Journal urges all readers to accept GM's invitation to attend.

DETROIT DISPATCH

TIRE PRICES WENT up 3¼ per cent last month, the fourth increase since Nov. 1954. Inner tube prices took a steeper climb, went up 6 per cent. Probability is that there are more increases to come. Reasons are: Rubber demand is up. Crude rubber price has almost doubled in the past year. Even with this price increase, use of natural rubber in the United States was up 10 per cent in the first seven months of this year as compared to the same period in 1954.

MUFFLER NOISE PROBLEM IS being solved, Lewis Kibbee, chief of American Trucking Assns. Equipment and Operations Section, told members of the Society of Automotive Engineers at its West Coast meeting last month. Truck operators have accepted the 125 "sone" sound level, most new trucks coming

off assembly lines are at least as quiet as this standard, and muffler makers are tooling up to supply replacement mufflers meeting the standard, he said.

SYNTHETIC RUBBER TO replace natural rubber in truck tires has been announced by Firestone, following a similar announcement from Goodrich last month (Aug., page 18). Goodrich expects to have a pilot plant producing its new rubber within a year. Firestone has not yet announced commercial production plans.

NEW MODEL ANNOUNCEMENTS FROM Ford and International Harvester are expected the middle of this month. Dodge now offers a tractor with its cab "dented" six inches in the back to permit use of longer trailers within a 45-ft overall length. GMC diesel

trucks inva
City of Chi
trucks, first
diesel truck

TIRES ARE
height ever
profile" tul
good but r
required.

GAS TUR
NOW being
gearing. H
has to be
proportions
gear noise
able level.
gear box
transmission
cision toler
pressurized

WASHINGTON RUNAROUND

CABINET COMMITTEE REPORT ON Transport Policy asking for redefinition of private carriage, selective rate cutting, unrestricted railroad trucking (July, pages 18 & 20) comes up for Congressional hearing the 19th of this month. Hearings will be restricted. Only American Trucking Assns. has been invited to represent the trucking industry. Fleet operators will probably find it easier to talk over the proposed legislation (see page 74, this issue, for a special analysis of it) while their legislators are at home with Congress in recess, than when they return to Washington in January.

CIVIL DEFENSE PLANNING FOR trucks is headed by Einer Mohn (Teamster Union vice president), Alec Scherer (Scherer Freight Lines boss), and William Noorlag (Central Motor Freight Assn. director). The three were sworn in last month as chief of administration, chief of operations and chief of special staff respectively in the newly created Highway Division of the Federal Civil Defense Administration.

HIGHWAY-BUILDING LEGISLATION IS far from dead. It is an even bet that

President Eisenhower will call a special session of Congress to consider increased federal-aid for highways this fall. If he doesn't, highways will be a hot topic in the 1956 Congressional session. Meanwhile the Governors, holding their annual meeting in Chicago last month, renewed their support for more highway spending. (Details appear on page 102, this issue.)

CONGRESS WENT HOME WITH three bills of interest to truck operators still pending. The trip lease bill (S898), reported favorably out of Senate Committee, still has to pass the Senate and House. Truck, trailer and semi-trailer theft (HR3702) has passed the House, is in Senate committee. Trailer lien bill (S1966) has passed the Senate, is in House committee. All three will be ready for debate in January, do not need to be reintroduced.

CAPTIVE "PIGGY-BACK" SERVICE WITHOUT a motor carrier certificate has been OK'd by the Interstate Commerce Commission. The ICC ruled (I&S M-6214) that the tractor haul in the terminal area is pick-up and delivery service incidental to rail transport-

tation. Th
approval
tive" rates

ICC DID bo
and Easter
shippers w
trailers an
plus free r
of origin
raised no
allowance
didn't show
and reason

ATA FOU
second \$2
Rubber C
was made
money wi
tisements
zines feat
vices rend
truck driv

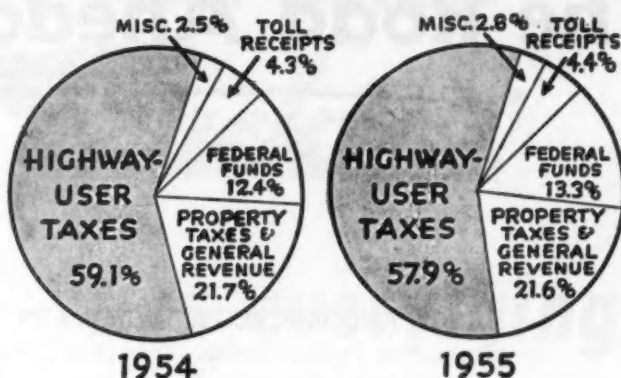
FAST TA
transporta
pended. S
Mobilizati
viewed to
exists to r

trucks invaded a new field when the City of Chicago bought 75 sanitation trucks, first order by any major city for diesel trucks for that type service.

TIRES ARE being tested with overall height even less than the new "low profile" tubeless tires. Design looks good but much more testing will be required.

GAS TURBINE ENGINE PROBLEM NOW being investigated is that of gearing. High speed of output shaft has to be brought down to useable proportions, and, at the same time, gear noise has to be kept to a reasonable level. It probably will require a gear box much larger than present transmissions built with aircraft precision tolerances. Another possibility is pressurized lubrication.

HIGHWAY USE TAXES



Says the Bureau of Public Roads, state and local highway use taxes reached \$3.2 billion in 1954, should total \$3.3 billion in 1955. As shown above, these taxes are well over half of all highway revenue. If toll receipts and federal funds (considered as deriving from federal highway user taxation) are added, highway users are paying more than 75¢ of every dollar of highway revenue.

IN THIS ISSUE . . .

How do you **CUT COSTS** in fleet operation? Public Service of Indiana gets off to a good start with careful layout and design in its new shop (page 68). Wilkes-Barre's bus fleet does it by warring on gas hogs (page 72).

Sometimes it's **RULES AND REGULATIONS** that run up fleet expenses. Find out what the Transport Policy Report means to you before it costs you money (page 74). Check also this roundup of changes in registration fees, gas taxes, safety regulations, and size and weight limits made by the 44 state legislatures that met this year (page 80).

Here are two timely reports on two **HOT SUBJECTS** in the fleet field today—air breakaway systems (page 76) and high additive oils (page 94).

COOPERATIVE VENTURES pay off for fleetmen. West Coast fleets protect both the fleet and the driver with a safety center (page 90). Utility fleet operators meet together to solve maintenance problems (page 92).

tation. The Commission also gave approval to "motor carrier competitive" rates for captive "piggy-back."

ICC DID ban a proposal by the Chicago and Eastern Illinois Railroad to grant shippers who furnish their own loaded trailers an 18½¢ per cwt allowance plus free return of the trailer to point of origin (I&S 6340). The Commission raised no objection to the idea of an allowance, merely said the evidence didn't show the 18½¢ figure to be just and reasonable.

ATA FOUNDATION HAS received a second \$25,000 grant from the Dayton Rubber Co., whose first contribution was made in September, 1953. The money will finance a series of advertisements in national consumer magazines featuring the many roadside services rendered the motoring public by truck drivers.

FAST TAX WRITE-OFFS FOR the transportation industry have been suspended. Says the Office of Defense Mobilization, the program is being reviewed to see if adequate capacity exists to meet defense needs.

The Road Ahead



TRUCK AND BUS REGISTRATIONS IN 1955 should reach 10,347,000, says the Bureau of Public Roads. This is a 2.8 per cent increase over the 10,068,136 recorded last year. California remains top state with an estimated total of 829,000 trucks and buses. Florida is expected to show the most increase—6.5 per cent over 1954 for a total of 238,000 trucks and buses.

THE MAJORITY OF PEOPLE RECOGNIZE the truck driver as a safe and courteous driver and agree that trucks are essential in war and peace, ATA Public Relations Director Walter Belson told SAE members at their annual West Coast meeting. But he added, continued intensive research and public relations effort are needed to attain the third vital objective of the trucking industry's public relations requirements—widespread recognition that the industry stands on its own feet and pays its way.

INCREASES IN ICC insurance requirements have been proposed effective Nov. 1, 1955. New minimum limits for property carriers would be \$25/100/10,000. Bus requirements would range from \$25/100/10,000 to \$25/300/10,000 depending on the seating capacity of the bus.

PIGGY-BACK ROUTING GUIDE PUBLISHED in the September issue of "Distribution Age" shows the service has expanded to include more than 160 major points with 32 railroads participating. Only about four of the rail carriers offer the service to common carrier truck lines. Rail-Trailer Co. reports movement of common carrier truck line trailers on the Pennsylvania Railroad between New York-Philadelphia and Chicago is approximately 1000 trailers per month.

TOLL RODS ARE running into a few detours, for example: Illinois planned a \$390 million bond sale last fall to finance construction of a 193-mile toll system, postponed it because of market conditions. Now the total cost of the projected toll roads has increased about \$20 million with Illinois considering use of several small bond issues instead of one large one. In New York, high interest charges led to postponing a \$125 million bond issue for the Thruway a couple of months ago. Now \$50 million bond anticipation notes fully guaranteed by the state of New York have been sold to banks. Texas Turnpike Co., a private company, plans a \$130 million bond sale next month after postponing it from last March.

TRAILER SHIPMENTS SET a new record during the first six months of this year when factory shipments reached a \$167 million figure. In fact, at the midyear point, only bus sales are not ahead of the first six months of last year in the data shown below:

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires				
									Replacement Shipments		Original Equip. Shipments		Inventory End of June
	June	6 Months	June	6 Months	June	6 Months	June	6 Months	June	6 Months	June	6 Months	
1955	90.0	434.1	101.6	535.5	6.9	35.3	237	1604	729.7	4262.8	449.0	2469.6	2762.8
1954	85.9	433.5	74.3	468.6	5.1	27.9	349	2024	703.1	3690.3	302.5	1979.6	2895.5

ALL

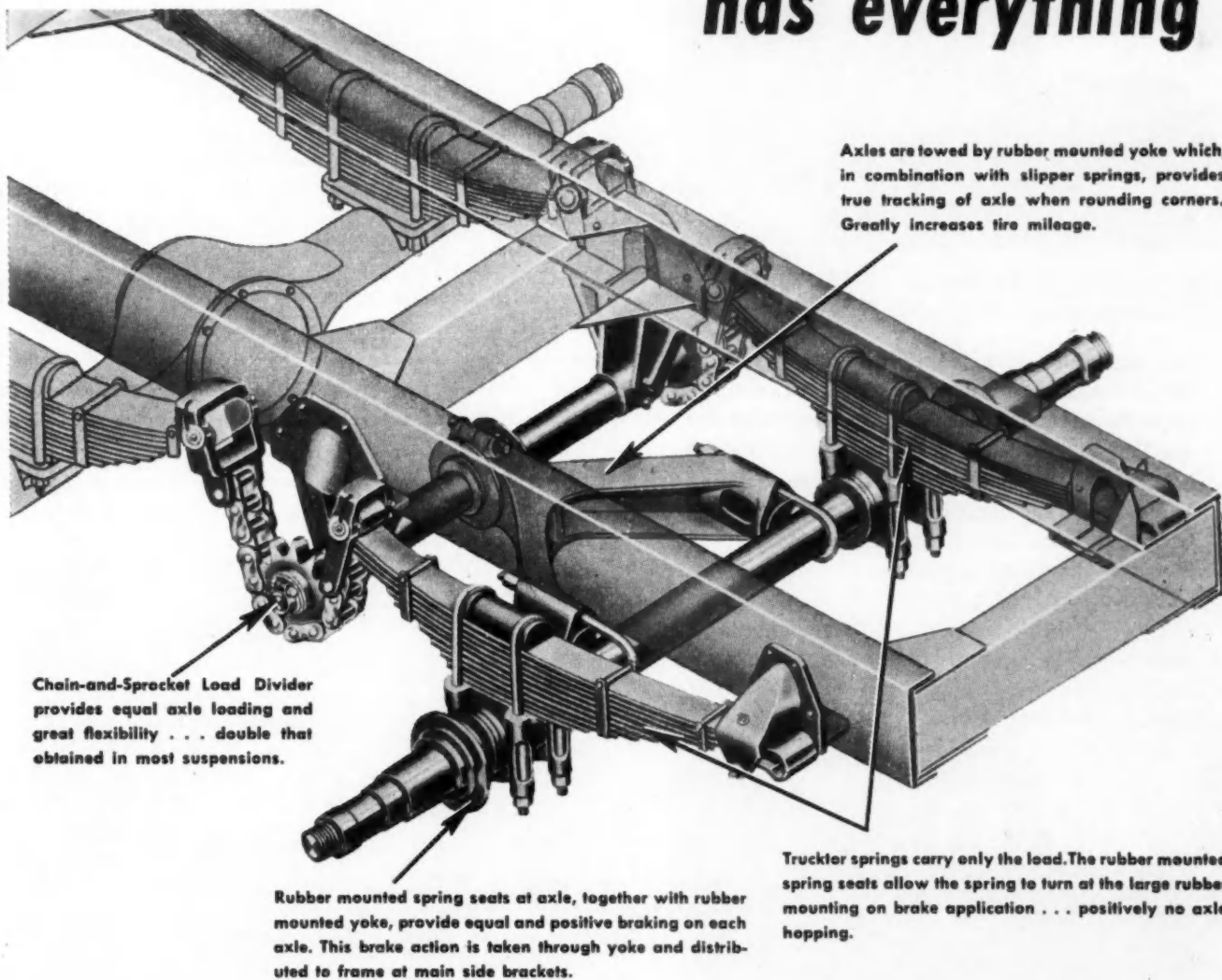


Chain-and-S provides eq great flexibl obtained in

Your 4-wh of addition Wheelers. maintain, ute to open complete p Tractor 3 models. Fo tributor, o

COMMERCIAL

All 3rd axles have their points but only *Trucktor*[®] has everything



Axles are towed by rubber mounted yoke which, in combination with slipper springs, provides true tracking of axle when rounding corners. Greatly increases tire mileage.

Chain-and-Sprocket Load Divider provides equal axle loading and great flexibility . . . double that obtained in most suspensions.

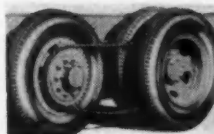
Rubber mounted spring seats at axle, together with rubber mounted yoke, provide equal and positive braking on each axle. This brake action is taken through yoke and distributed to frame at main side brackets.

Trucktor springs carry only the load. The rubber mounted spring seats allow the spring to turn at the large rubber mounting on brake application . . . positively no axle hopping.

Your 4-wheel trucks and trailers will carry thousands of pounds of additional payload when you convert to Trucktored 6-Wheelers. Yet Trucktor 3rd Axles cost practically nothing to maintain, because they combine *all* the features that contribute to operating and maintenance economy, together with complete protection to driver, load and vehicle.

Trucktor 3rd Axles are available for most truck makes and models. For full details call your Truck Dealer, Trucktor Distributor, or write direct to the Trucktor factory.

Detachable Chain-and-Sprocket 4-WHEEL DRIVE



Makes tire chains unnecessary. When extra traction is needed, sprocket chains are slipped over sprockets and pinned. Attached and detached quickly, simply, without removing wheels (in picture, wheel removed to show construction).

THE TRUCKTOR CORPORATION, Route 22, Mountainside, N. J.

Safety IS NO ACCIDENT—6-Wheelers ARE SAFER!

BOYERTOWN MAKES SIT-STAND DRIVE

Available on 7 Body Models

On ALL Chassis with
Automatic Transmission

With the recent availability of Automatic Transmissions on all standard makes and models of flat face cowl chassis, together with



Stand Drive In Use On a Model SM-6
Standard Seat Folded to Front of Driver.

the introduction of simplified Stand or Sit Drive Controls on all models of flat face cowl type Boyertown bodies, it is now possible for the Dairy to have the chassis make and model of their choice complete with a Boyertown "better-built" retail or wholesale delivery body equipped with either the new simplified Stand or Sit Drive Controls.

Many problems encountered in route delivery, body repair and servicing, and durability of the body are eliminated through the design and construction of Hi-Tensile Steel Boyertown Bodies.



Conventional Sit Drive On The Stand Drive
Body Above with Seat Swung Back to Stand-
ard Position.

Full information about these new Boyertown Dairy Delivery Body features are immediately available by writing, phoning (7-2146) or visiting:



DATES and DOINGS

(For calendar of Fleet Training Courses, see page 130.)

SEPTEMBER

- 14-15—Central Motor Freight Assn., Annual Meeting, Palmer House, Chicago, Ill.
- 14-16—National Assn. of Motor Bus Operators, Annual Meeting, Drake Hotel, Chicago, Ill.
- 14-16—Tennessee Motor Transport Assn., Annual Meeting, Hermitage Hotel, Nashville, Tenn.
- 15-17—Idaho Motor Transport Assn., Annual Convention, Shore Lodge, McCall, Idaho.
- 18-20—Washington Motor Transport Assn., Annual Convention, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Canada.
- 18-21—National Truck Leasing System, Annual Meeting, The Knickerbocker Hotel, Chicago, Ill.
- 22-23—Michigan Trucking Assn., Annual Meeting, Hotel Pantlind, Grand Rapids, Mich.
- 22-24—Automotive Parts Rebuilders Assn., Annual Convention and Trade Show, Fort Shelby Hotel, Detroit, Mich.
- 22-24—Kansas Motor Carriers Assn., Annual Convention, Hotel Broadview, Wichita, Kan.
- 22-24—Pennsylvania Motor Truck Assn., Fall Meeting, Bedford Springs Hotel, Bedford, Pa.
- 24—Massachusetts Motor Truck Assn., Annual Convention, Somerset Hotel, Boston, Mass.
- 26-29—American Transit Assn., Annual Convention, Hotel Statler, Boston, Mass.
- 27—Motor Transport Assn. of Connecticut, Annual Convention, Hotel Statler, Hartford, Conn.
- 29-30—National Automobile Transporters Assn., Annual Convention, Sheraton-Cadillac Hotel, Detroit, Mich.
- 29-Oct. 1—Virginia Highway Users Assn., Annual Meeting, The Cavalier Hotel, Virginia Beach, Va.

OCTOBER

- 1-6—Baking Industry Exposition (including truck and equipment exhibits), Convention Hall, Atlantic City, N. J.
- 10-12—Truck Body and Equipment Assn., Annual Convention and Exhibit, Morrison Hotel, Chicago.
- 12-14—Automotive Electric Assn., Regional Conference, Kansas City, Mo.
- 13-16—National Truck Rondeo, American Trucking Assn., National Armory, Washington, D. C.
- 17-21—American Trucking Assn., Annual Convention, Statler and Mayflower Hotels, Washington, D. C.
- 17-21—National Safety Council, National Safety Congress and Exposition, Chicago, Ill.
- 24-26—Automotive Electric Assn., Regional Conference, Los Angeles, Cal.
- 26-28—American Society of Body Engineers, Annual Technical Convention and Exhibit, Rackham Memorial Bldg., Detroit, Mich.
- 31-Nov. 2—Automotive Electric Assn., Regional Conference, Portland, Ore.
- 31-Nov. 2—Society of Automotive Engineers, Golden Anniversary Transportation Meeting, The Chase Hotel, St. Louis, Mo.

NOVEMBER

- 2-4—Society of Automotive Engineers, Golden Anniversary Diesel Engine Meeting, The Chase Hotel, St. Louis, Mo.
- 4-5—West Virginia Motor Truck Assn., Annual Meeting, Daniel Boone Hotel, Charleston, W. Va.
- 9-10—Society of Automotive Engineers, Golden Anniversary Fuels and Lubricants Meeting, Bellevue-Stratford Hotel, Philadelphia, Pa.
- 10-11—Arkansas Bus and Truck Assn., Annual Meeting, Hotel Marion, Little Rock, Ark.
- 17—Maine Truck Owners Assn., Fall Get-Together, Lafayette Hotel, Portland, Me.
- 17-19—Montana Motor Transport Assn., Annual Meeting, Florence Hotel, Missoula, Mont.

DECEMBER

- 1-3—Oregon Trucking Assn., Annual Meeting, Multnomah Hotel, Portland, Ore.
- 7-8—Automotive Service Industries, Executive Booth Conference, Navy Pier, Chicago, Ill.

MONEY ON

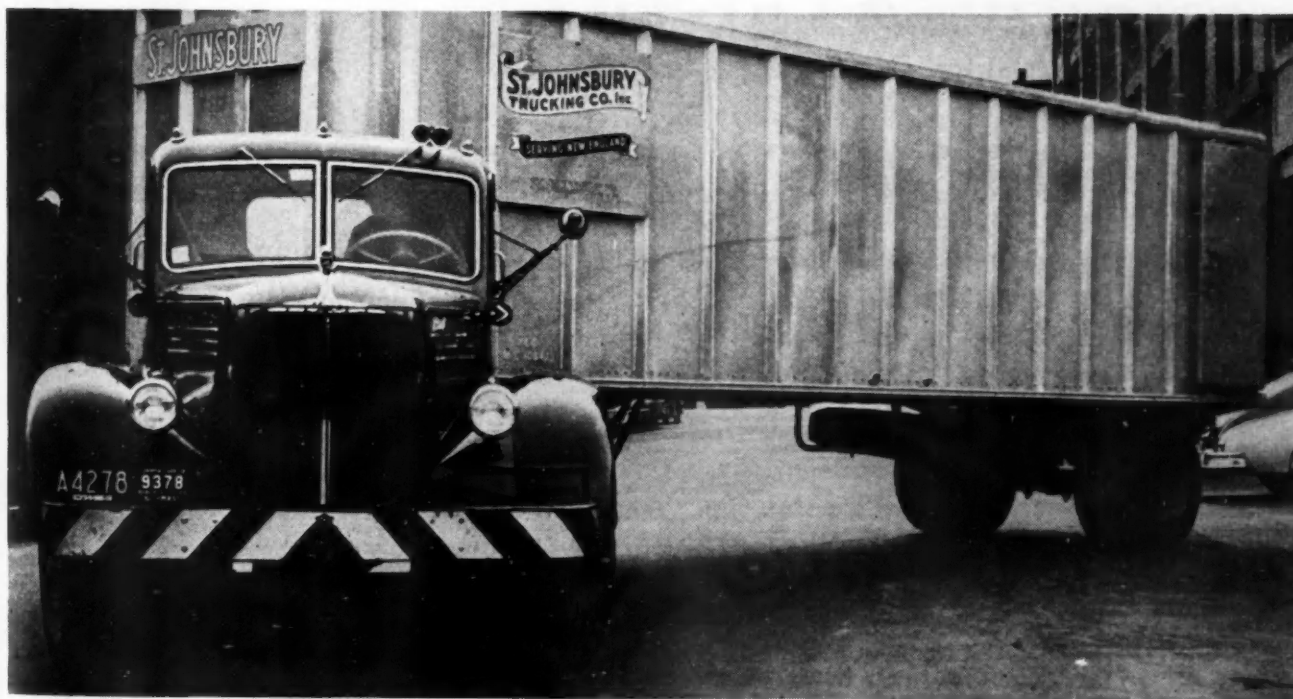


Kelly Nylons Give Lowest Cost-Per-Mile

"Our butane transport trucks operate throughout the South and Northwest under all kinds of conditions and weather. We have used all kinds and types of tires

on our fleet, but find that by using the Kelly Nylon Cord CHT we get the lowest cost per mile possible."

L. B. Newman, Consolidated Gas & Equipment Co., Plainview, Texas



Not a Single Blowout with Kelly Nylons

"We've used Kellys almost exclusively for the past 15 years. Some time ago we started using Nylon Cord Kellys and to date have not had a single impact or heat blowout. Original mileage on these

tires has increased by 10 to 15 per cent, and many casings have been recapped twice, with some ready for the third recap. We are converting our entire fleet to Kelly Nylon Cord Truck Tires."

M. Wiseman, Supervisor, St. Johnsbury Trucking Co., St. Johnsbury, Vt.

CCJ BULLETIN BOARD



DROWSY DRIVERS

A drowsy driver dead-heading down the highway is about ten times more dangerous than his weight in TNT. He's an accident heading some place to happen. And he will be lucky if a sudden bump awakens him before somebody's rear end does.

Don't let it happen to you. It's a pretty good guide; when you feel lead in your seat, just assume it reaches right up to your head. When you get overtired—that's a stop sign. When you feel groggy or sleepy—that's a stop sign. When the road blurs and your attention wanders—that's a stop sign.

Shut down for five minutes. Pull off the road; get out; walk around or go have a cup of coffee. But don't rely on seasick pills and backache remedies and stay-awake potions to keep you fit for driving. A short rest will usually do the trick.

Every day it happens—the man asleep at the wheel—the guy who figured he'd drive it on through without a rest—the bloke who had more guts than stamina. Don't take a chance if there's lead in your pants. For here, an extra five minutes may save a lifetime!

H Bolte

Want the
for the rea
on the "
Autocar R
stration o
Construct

G

AUTOCAR

Send me
applies to

NAME _____

POSITION _____

FIRM _____

CITY _____

☆ Nut and bolt construction

☆ Rigid cab frame

Autocar

— BUILT LIKE

A MODERN SKYSCRAPER

AUTOCARS ARE BUILT TO LAST!

Nuts and bolts provide greater fatigue strength . . . withstand severe vibrations . . . have really rugged clamping force.

And Autocars are built with nuts and bolts . . . have been for years. Heat-treated, high-strength bolts that fit the hole exactly . . . installed with heat-treated tension lock washers under both bolt head and nut.

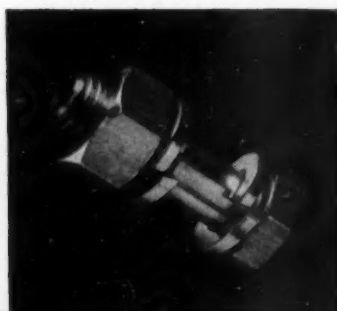
It's typical of Autocar Quality. It's your assurance that Autocar is built for longer life . . . lower maintenance cost . . . more work!

AUTOCAR TRUCKS

AUTOCAR DIVISION OF THE WHITE MOTOR COMPANY • EXTON, PA.

High-Strength Bolted Construction

Want the best in motor truck design for the really rugged jobs? Then hop on the "bolt" wagon! See your Autocar Representative for a demonstration of Autocar Nut and Bolt Construction.



Autocar driver cab has "Skyscraper" Structure

...all metal welded construction

"Greatest cab on the road!" That's what drivers all say. Rugged frame is made of heat-treated formed channels assembled with heat-treated Autocar nut and bolt construction. Assures long life no matter how tough the work your Autocar does.

GET FACTS NOW !

AUTOCAR DIVISION, The White Motor Company, Exton, Pa.

Send me latest information about Autocar Nut and Bolt Construction as it applies to my truck operations.

NAME _____

POSITION _____

FIRM _____

CITY _____ ZONE _____ STATE _____

3-J





Laugh it off!

A WOMAN NEEDS TWO GOOD LINES. ONE A MAN CAN LISTEN TO AND ONE HE CAN LOOK AT.

ccj

Steno May: "My, my but I had a swell time last night. That new manager at the truck terminal took me to a dance and showed me some new steps."

Steno Fay: "Were they hard?"

Steno May: "No, we took some cushions along"

ccj

Slim 'n Greasy: "How many beers does it take to make you dizzy?"

Bar-Hopping Bessie: "Four or five, and don't call me dizzy."

ccj

Fork Truck Operator: "My gal has such crazy habits that I'm turning in my car and buying an outboard cruiser."

Freight Checker: "You mean she likes boats and hates cars?"

Fork Truck Operator: "No. She likes walking and can't swim!"

ccj

Freight Claim Agent: "Honey, our national association is having a big convention up in New York. Do you mind very much if I attend?"

Long-suffering Wifie: "No, dearie, go right ahead. Just don't come back unexpectedly."

ccj

SLIM 'N GREASY SAYS HE'S BEEN BURNING BOTH ENDS OF THE CANDLE AND IT MAKES IT TWICE AS HARD TO KEEP HIS WIFE IN THE DARK.

Motor Freight Salesman: "The traps on this course are very annoying."

Traffic Manager (trying to putt): "Yes, and for pity's sake will you please close yours."

ccj

Out on the town for an evening of fun, the two truck mechanics were sitting at their favorite bar. As the evening wore on they became thoroughly plastered. One turned to the other and said: "Shay, I gotta riddle for you. My face ish like Heddy La marr's my torsho's like Marilyn Mon-rosh's, an' muh laigsh'r like Marlene Dietrich's. Who am I?"

His inebriated fellow mechanic replied, "I don't give a damn who you are, jus' kissh me!"

ccj

Tire Mechanic: "Did your wife have much to say when you got home late from the poker party last night?"

Brake Specialist: "No, but that didn't keep her from talking for two hours."

"Cici Jay"



EVERYBODY NOW SING: "I KNEW HE HAD THE DROP ON ME WHEN HE SHOT ME WITH A WATER PISTOL."

ccj

Shop Electrician: "Have you any four-volt, two watt bulbs?"

Parts Room Clerk: "For what?"

Shop Electrician: "No, two."

Parts Clerk: "Two what?"

Shop Electrician: "Yes."

ccj

Tank Truck Driver: "Looka here, gal, this coffee tastes like mud."

Diner Waitress: "Well, it was ground this morning."

ccj

Maintenance Steno: "My boy friend kissed me last night when my father was home."

Safety Dept. Steno: "Weren't you afraid of what your father would do?"

Maintenance Steno: "No. He was home and I and my boy friend were sitting in the back seat of a car on a dark road in the country."

ccj

Baby Sardine (becoming frightened at its first sight of the atomic submarine Nautilus making its first dive): "Mamma, mamma, what is that thing?"

Mamma Sardine: "Don't worry, honey. It's just a can of people."

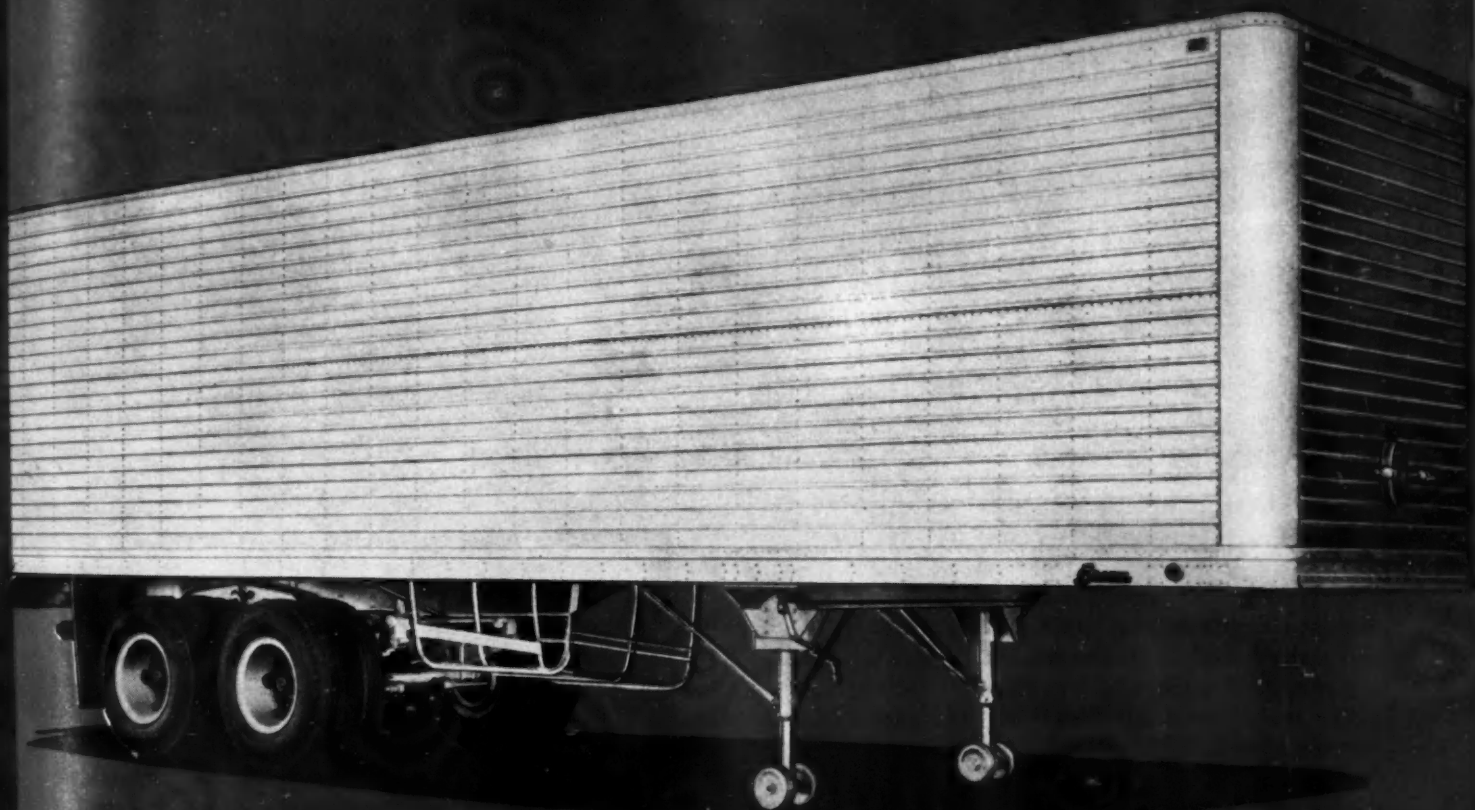
ccj

WEAVIN WILLIE, OUR CITY DRIVER WHO IS QUITE AN AUTHORITY ON GIRLS, SAYS: "TO GET INTO TELEVISION THESE DAYS, A GIRL HAS TO KNOW SOMEBODY OR HAVE SOME BODY."

Resume Work



USE SHULER AXLES



THERE ARE NO BETTER AXLES, AT ANY PRICE!

Since 1915, Manufacturers of: *One-Piece* Tubular and Square Commercial Trailer Axles, Heavy-Duty Front Axles for Trucks, Busses, and Off-Highway Equipment, Low-Bed Machinery Trailer Axles, Heavy-Duty Vacuum and Air Brakes, Miscellaneous Forgings.

SHULER AXLE COMPANY, Incorporated, LOUISVILLE, KENTUCKY

SUBSIDIARY OF FULLER MANUFACTURING COMPANY

SALES OFFICES in DETROIT, CHICAGO, OAKLAND and TULSA

WEST COAST WAREHOUSE
Oakland, California

SOUTHWEST WAREHOUSE
Fort Worth, Texas



Trucks

Without the mighty

Bu

trucks



KEYSTONE among truck fleets are those that build, improve and maintain the nation's highways. Without their work, all other truck fleets, all vacation or business-bound motorists, all bus lines would be "stuck in the mud" of totally inadequate roads.

They are a small but mighty segment of the nation's 9.8 million trucks — number about one quarter million vehicles. They are busy fleets. This year, according to a forecast by the Bureau of Public Roads, they will help build \$4.6 billion worth of new highways and aid in maintenance totalling \$1.8 billion—a new highway building record.

An Expanding Fleet

They will continue to be busy in the years ahead, will probably expand despite the fact that several "king size" highway pro-

grams were killed in the closing days of this year's Congress (Aug., page 17). The Clay Committee Report, outlining the President's proposed \$101 billion, 10-year highway program, said that even if no new major road building program is undertaken, over twice as much will be spent for highways in the next ten years as compared with the past ten years —\$47 billion as compared to \$21 billion.

More than that, a recent estimate by the Bureau of Public Roads figures the nation's road needs over the next 30 years at \$297 billion.

There is no doubt that the country's highway-building truck fleet will be plenty busy for some time to come.

Highway Building Fleet

Just what does this highway-

building truck fleet look like? Most recent estimate was made by the American Road Builders' Assn. based on the fleet as of 1954. It includes equipment available to contractors and public highway departments for use in highway construction and maintenance. Here is ARBA's breakdown:

Type of truck	Available in 1954
Pick-ups & passenger cars	36,710
1½-3-ton trucks	99,000
Over 3-ton trucks	67,200
Misc. trucks	5,050
Off-highway hauling equipment (trucks, trailers, wagons)	11,000
Truck-mounted mixers, agitators	8,300
Total	227,260

This truck fleet includes 300,000 way construction equipment include 100,000 special trucks for example part of the 100,000 hydraulic bodies.

Use of way program A.R.B.A. 100,000 more needed to annual highway program, which added for highway

Hard Work

The highway working short life rough an

Build the Highways

trucks of the highway construction fleet, we'd all be "stuck in the mud"

A Nation on Wheels Depends on Trucks

Today in the United States, over 48 million passenger cars and about 10 million trucks and buses travel an estimated 575 billion miles a year.

To build and maintain the 3,000,000 miles of roads and streets so vital for continued national prosperity, it takes a coordinated team of engineers, contractors, highway departments, road building machinery and trucks.

In this first of a series describing the nation's truck fleets, Commercial Car Journal tips its hat to the highway-building trucks—the fleets on which 58 million vehicles depend for better highways.

This truck estimate does not include 300,000 units of other highway construction and maintenance equipment in use. Nor does it include the many items of special truck-mounted equipment; for example, mounted on a large part of the above trucks are 145,000 hydraulic hoists and dump bodies.

Use of trucks will grow as highway programs expand. A recent A.R.B.A. report showed that 18,000 more motor vehicles would be needed to handle a \$6 billion annual highway construction program, while 92,000 units would be added for an \$8 billion annual highway construction program.

Hard Working Fleet

The highway fleet is a hard working fleet. It has a relatively short life expectancy due to the rough and tumble use character-

istic of heavy construction operations. In fact, ARBA estimates the fleet has to be replaced every five years on the average.

Here is how they saw it in 1954:

Type of truck	Avg. life (years)	Replacements needed in 1954
Pick-ups and passenger cars	4	9,180
1½-3-ton trucks	5	19,800
Over 3-ton trucks...	6	11,370
Misc. trucks	6	840
Off-highway hauling equipment	7	1,570
Truck-mounted mixers, agitators	5	1,660
Hydraulic hoists and dump bodies	6	24,100

Future of the Fleet

Even if there were no expanding highway program, the highway building truck fleet will continue to expand commensurate with

the expansion of mechanization in the industry. Says the BPR, greater use of equipment means cheaper roads because it gives each worker a greater average productivity. The Bureau estimates that highway construction would cost about twice as much if it weren't for the trucks and other equipment used in highway operations.

This fleet expansion means, of course, more truck drivers, more trained mechanics, greater opportunity for fleet superintendents as each mile of highway is built, improved and maintained in the years ahead. In addition to this direct employment, the highway-building truck fleet is a vital cog in an industry that in October, 1954, employed 234,000 men plus the personnel of state, county and local highway departments.

Purchasing Power

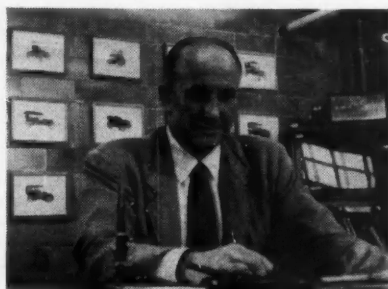
In addition to the equipment needs, outlined above, the highway fleet is a heavy buyer of replacement parts, fuel, oil and tires. Although an accurate estimate of total purchases is not possible, an idea of these expenses can be had from the following example.

Several construction companies engaged in Turnpike and expressway building estimated their tire cost at about one per cent of total highway costs. Taking the BPR's forecast for 1955 of \$4.6 billion worth of new highway this year, highway construction trucks will spend about \$46 million for tires this year.



Interior view from point near helicopter parking area shows parking areas at left, servicing areas at right, lighting facilities, drain. Below. Simplified layout shows location of work areas, equipment, service and vehicle parking sections

Public Service of Indiana Is

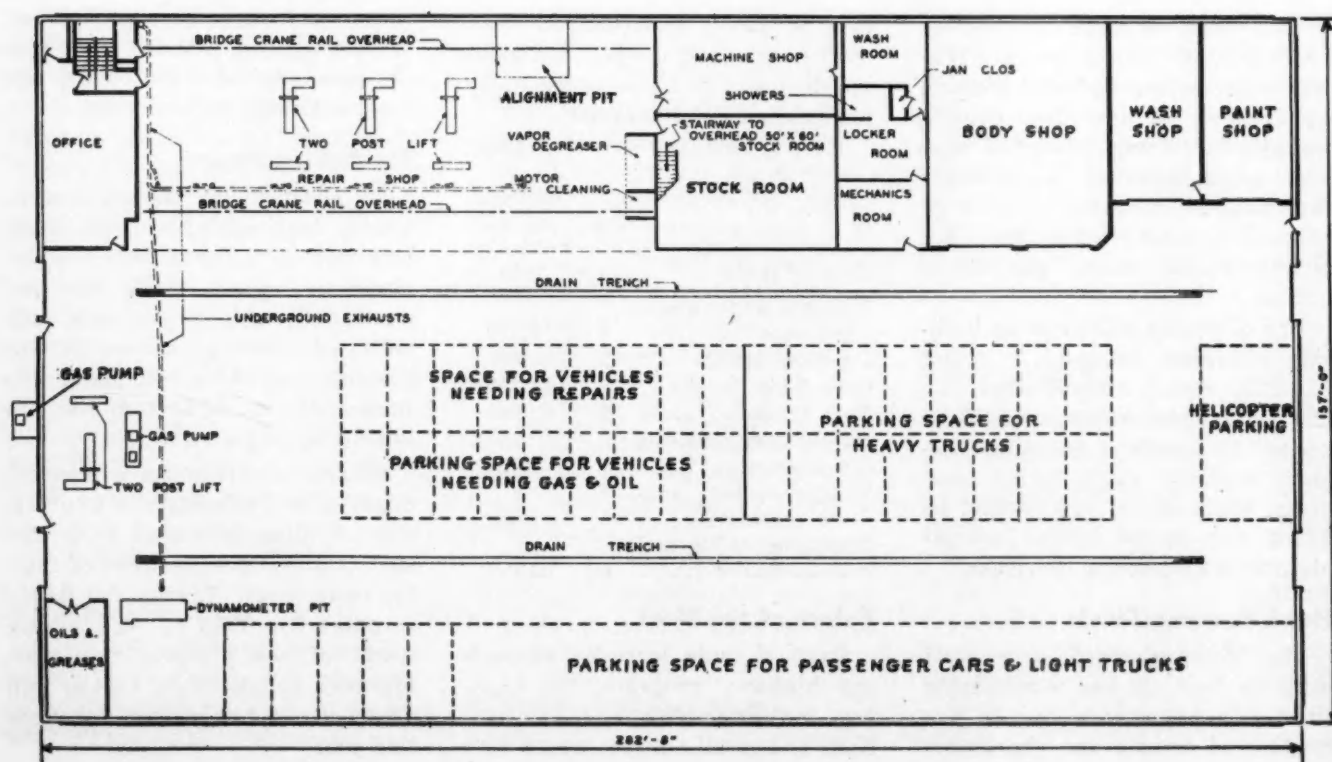


By L. L. Clark

Supt. of Transportation
Public Service Co. of Indiana, Inc.

TOPS IN SHOPS

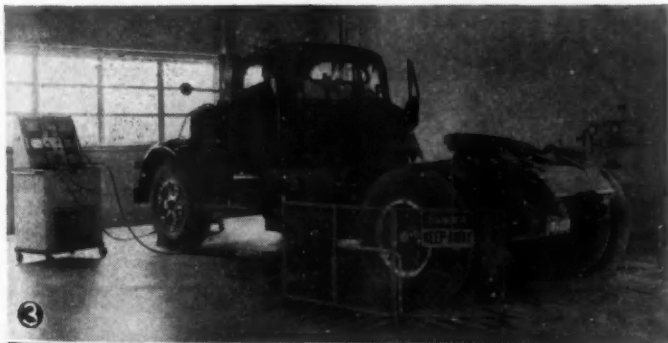
Modern, 50,000 sq ft garage is scientifically





Typical of the equipment used in the new shop is this tester being used in general repair section

laid out for speedy, efficient PM. Careful choice of tools, equipment cuts overhaul time



WITH ONE of the largest and most completely equipped garages in this part of the country, and four years' experience in living with the proper facilities and equipment to do the maintenance job, it seems safe to advise one and all that it pays to invest in the best. Our maintenance costs have dropped considerably since we opened this new garage building due to four important advantages:

1. Man hours per vehicle have been reduced because adequate facilities are available for every phase of maintenance.
2. Work space is sufficient to permit quick and easy maneuvering of work so that the most efficient use is made of every man and tool.
3. Shop layout, that is location of service

(TURN TO NEXT PAGE, PLEASE)

Dynamometer is located at front of shop. It simulates road conditions, saves time in diagnosing troubles and adjusting vehicles to top efficiency

Portable balancing equipment eliminates need for removing heavy wheels, balances entire assembly in one operation. Wheel alignment rack is nearby



... Tops in Shops

Continued from Page 69

areas, is such that no time is lost in inspection and repair from the time the vehicle enters the shop until it is ready for the road.

4. Our mechanics do a better job because of the improved morale factor which accompanies good working conditions.

When you add these savings up, a modern shop is not a luxury at all. It is a good investment in better maintenance.

Our new garage building located in Plainfield, Ind., adjacent to the administration building of the Public Service Company of Indiana, occupies more than 50,000 sq ft, providing sufficient facilities for the repair of our entire truck and passenger car fleet. While many of these vehicles are scattered over 70 counties and get service attention at various stations, all of them at some time or another are sent through our central shop for engine work, body work, tune up or painting periodically.

Bridge Crane Speeds Work

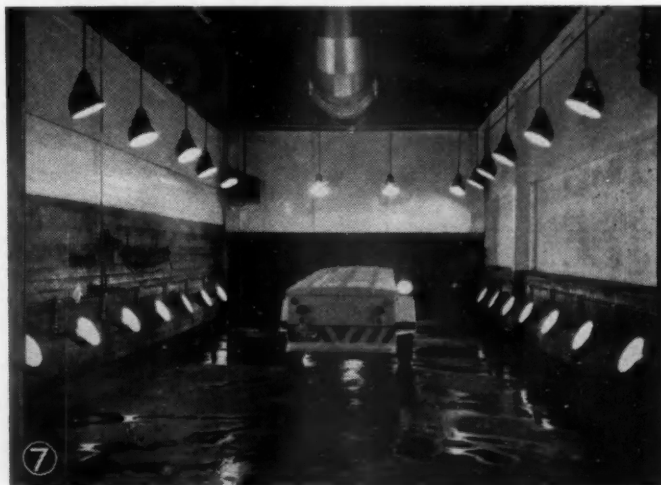
A great deal of time and study went into the design of this shop. The simplified shop plan here will show where we finally decided to locate each repair and work area to meet our particular problems. Note my office in the upper left hand corner and adjacent to the main

(TURN TO PAGE 112, PLEASE)

Last stop before being dispatched is this service area where vehicles get gas, oil, water, a quick inspection



Above. Modern wash room will handle the largest vehicle. Below. 800 sq ft paint booth has water-wash ventilating system. In both areas, good lights make for better work.



NON-CHARGEABLE:

A Accident

B Fires

C No Tonnage

D Transport

E Miscellaneous

CLOSE TOP

CHARGEABLE:

10 AIR

[illegible][illegible]

[illegible]

By Allen Coolbaugh

Supt. of Maintenance
Wilkes-Barre Transit Corp.



Defect card (No. 3) filled out by driver, is first step in catching potential troubles at Wilkes-Barre. Operation log (No. 2) shows a daily picture of reported and actual troubles. Service call analysis (No. 1) sets up a complete listing of all road failures for a specific month.

Do Road Calls Measure PM Efficiency?

Road failure records may help spot too little or too much maintenance, but when used between fleets to compare shop efficiency, they may be misleading

MANY BUS properties set up a road call tabulation and use it to determine the maintenance efficiency of the shop. In some respects this is a good guide to use in checking up on certain deficiencies in vehicle design as well as in the maintenance program. You can tell from the failure report just where more attention is required.

However, the conflict begins when we try to define a road failure. It is of no value to accumulate a long list of so called "failures" that include troubles which are a responsibility of the Transportation Department. The list is

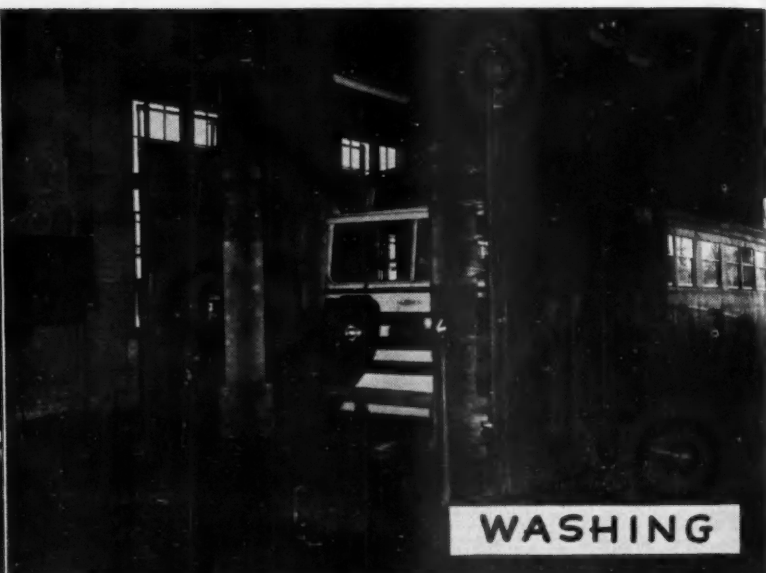
of no value in comparing shop efficiency with other properties if it includes breakdowns and call-ins resulting from such things as "improper seat adjustment," "inoperative money changer," "stuck" (because the Transportation Department did not require chains that day), etc.

What Is a Road Call?

Somewhere along the line we've got to determine just what we

mean by a road failure and all properties must use the same yardstick if we are to use these figures for inter-property comparison.

As far as we are concerned a road call applies to incidents, accidents or mechanical or electrical failures requiring the attention of the maintenance department in order to continue the satisfactory and efficient operation of the vehicle. We in the maintenance
(TURN TO PAGE 186, PLEASE)



Left. The 175-ft hooded paint stall uses two fans above and two below to raise fumes through exhaust vents in roof. Vents in floor rails at sides of bus permit full volume circulation. Above. The washer is completely automatic. Photo electric cells turn water and brushes on and off as coach comes through

Wilkes-Barre Wars on Gas Hogs

Unique in coach properties is this unit for transferring coaches from shop to shop on old streetcar shuttle. The platform extends between the body and paint shop and the degreasing building, to the main maintenance shop. Mounted on rails it is powered by electricity through controls located on the shuttle. The system is not without its defects, says Allen Coolbaugh, but is what one gets when one inherits a streetcar barn. It is a good example of making existing facilities fit your needs. Next page. Wilkes-Barre designs their own mufflers, salvaging the old shell and pipes where they are serviceable. Larger holes are drilled into inlet and outlet pipes, the baffle is discarded and new ends are welded on. Back pressures are low, noise level is satisfactory, new design lasts several times longer than the original



WILKES-BARRE Transit Corp. operates 75 buses and 68 trolley coaches over 18 million miles per year in this mountain city that offers plenty of headaches from the standpoints of weather and topography. Snowfall is heavy and winter temperatures often get down to 10 deg. below zero. Road traction on snow and ice keep the operators on their toes, but the maintenance department, too, gets involved when engines resist quick warm up and when steep grades take their tolls of tires and brakes.

In a move to offset rising costs at a time when declining patronage pinched the operation, Wilkes-Barre has waged a continual war on fuel economy. First move came several years ago when a careful study was made to determine the cost of engine idle and a program was instituted to cut it to a minimum. Even in a small property the difference between poor fuel economy and high gas mileage can spell the difference between profit and loss. Here's what a number of tests showed up in fuel waste.

Engine Idle Problem

It was determined that 1/10 gallon of

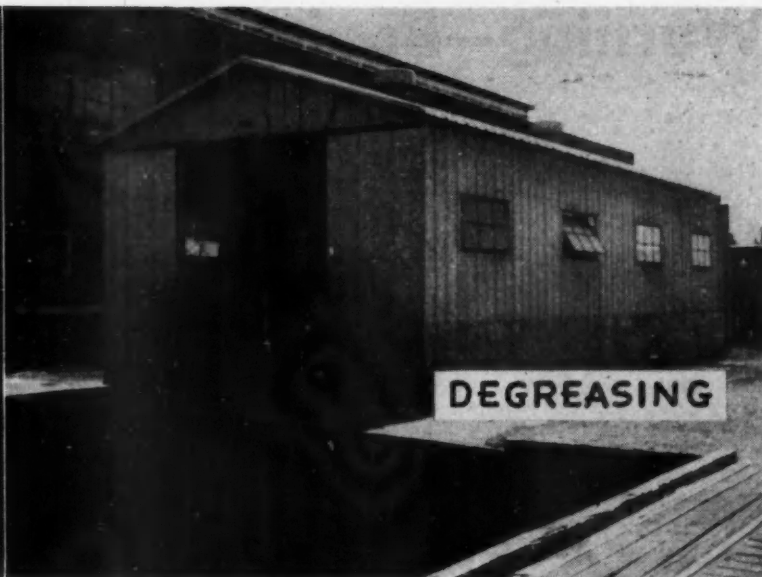
Right. A steam cleaning unit cleans components. Buses and conventional coaches is indicated just below house 8 combination with special equipment where engine Shop is well

gasoline was 6 minutes. This figure up to 37½ hours of fuel per gallon. The wastage of

A subse operators minimum. engines af to stop the was anticip 750 gal per Added bon provement rial decrea

High Fuel

The nex gram was A survey pressure v fuel consu (TUR



Right. A separate steel building is used for steam cleaning coaches and heavy components. Building is adjacent the "shuttle" and convenient to all shops. Storage of coaches is in 72-unit fireproof building located just behind shop. Nine separate stalls house 8 coaches each. The inspection station with seven pits and complete line up of equipment is opposite the machine shop, where engines and components are rebuilt. Shop is well laid out and properly lighted



gasoline was required to idle an engine 6 minutes and 12 seconds. In round figures this amounts to one gallon per hour. An analysis of layover time on all gasoline bus routes disclosed that this idling time amounted to 50 hours on weekdays, 37½ hours on Sundays. Thus 50 gallons of fuel per weekday amounts to 15,650 gallons. The 52 Sundays brought the figure up to 1950 gallons, making a total wastage of 17,600 gallons.

A subsequent order was sent out to operators to cut down idling time to a minimum. They were directed to shut off engines after two minutes of idling—or to stop the engine immediately if a delay was anticipated. Result was a saving of 750 gal per month or 9000 gal per year. Added bonus of this program was an improvement in oil condition and a material decrease in engine wear rate.

High Fuel Consumption

The next phase of the economy program was a stepped up war on gas hogs. A survey of the fleet showed that back pressure was a primary cause of high fuel consumption. A clean up program

(TURN TO PAGE 190, PLEASE)

Warning—Booby Trap Ahead

They're Gonna "Railroad"

Public hearings start this month on the contro-
Policy. Legislation affecting private, contract and

ON THE 19th of this month, a subcommittee of the House Interstate Commerce Committee begins a week of hearings on what American Trucking Assn's Executive Committee has termed "... an economic booby-trap for small business." The subcommittee will consider the Cabinet Committee Report on Transport Policy.

This report, released last Spring (May, page 17), recommends several changes in the Interstate Commerce Act including:

1. Complete revision of the National Transportation Policy.
2. Curtailment of the Interstate Commerce Commission's rate authority.
3. Restriction of the ICC's power to suspend rates.
4. Elimination of the need for prior approval by the ICC of 4th Section rates.
5. Legalization of volume rates.
6. Redefinition of private motor carriage.
7. Redefinition of contract carriage.

8. Stricter definition of freight forwarder.

9. Greater control over *intrastate* railroad operation by the ICC.

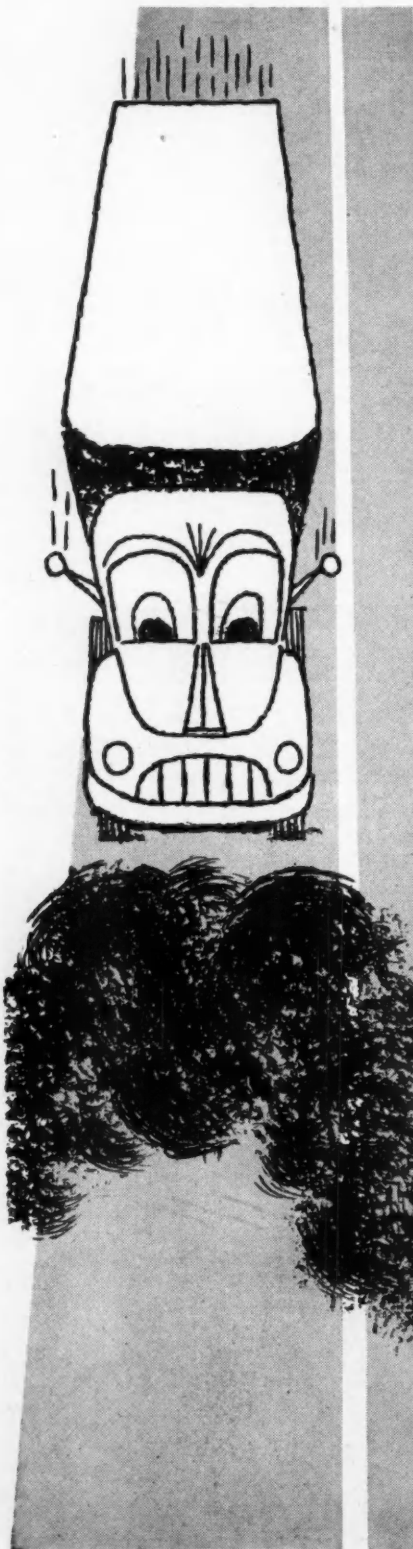
10. Publication in tariff form and filing with the ICC of Section 22 rates.

Changes in the IC Act, as outlined above, affecting both private and for-hire truck operators have been incorporated into identical "omnibus" bills (S 1920, HR 6141, HR 6142) and introduced into Congress (June, page 17).

As a special service for the nation's truck and bus fleet operators, COMMERCIAL CAR JOURNAL presents this analysis of the Report and supporting legislation.*

The hearings scheduled for later this month, to which only selected government and industry representatives are invited, are only the opening phase of what will be a sustained campaign by the railroads to push through Congress legislation

*Based on materials supplied by Commercial Car Journal's Washington News Editor Ray Stroupe.



the IC Act

versial Cabinet Committee Report on Transport

common carriers is already before Congress

to restrict private carriage and to permit rate cutting at the expense of the highway common carrier.

Fleetmen must take a prompt and active interest in this legislation, present their side of these proposals strongly and effectively. By studying the proposals and contacting their legislators now (either individually or through their state truck associations), fleetmen will find it much easier to eliminate that part of the proposals that adversely affect their truck operations and the efficiency of the nation's transportation than if they wait until the sensitive "election year" Congress convenes in January.

National Transportation Policy

The Cabinet Committee Report on Transportation and the enabling legislation call for a complete re-writing of the present National Transportation Policy. Three principal changes found here are:

1. Elimination of the present ban on "... unfair or destructive competitive practices; ..."

2. Encouragement of full competition between modes of transportation at "... not less than reasonable minimum charges, or more than reasonable maximum charges. ..."

3. Requirement that regulation be "... without special restrictions, conditions, or limitations on individual modes of transport."

The first two items have been implemented with more specific provisions amending the rate making sections of the IC Act.

Unrestricted Railroad Trucking

The proposal that regulation be without special restriction, condition or limitation on individual modes of transport, in the opinion of many motor carrier lawyers, opens the door to unrestricted truck operation by the railroads. It is felt that under this provision, the ICC could not limit railroad trucking certificates to service auxiliary or supplemental to the rail service.

Decisions of the Supreme Court upholding the legality of restricted railroad trucking certificates have

relied upon the present transport policy calling for recognition and preservation of the inherent advantages of each mode of transportation.

This has been carried over in the new legislation but in a greatly watered-down version. It now reads, "To reduce economic regulation . . . to the minimum consistent with the public interest and to the end that the inherent economic advantages, including cost and service advantages, of each mode of transportation may be fully realized in such a manner so as to reflect its full competitive economic capabilities; . . ."

Expert opinion says this change plus the proposed ban on restrictions would go a long way toward nullifying the imposing of limitations on railroad motor truck certificates.

Motor Carrier Definitions

The present definition of *common carrier* by motor vehicle remains the same in the proposed legislation but would include private or contract carriers who do not qualify under the new definitions for these operations.

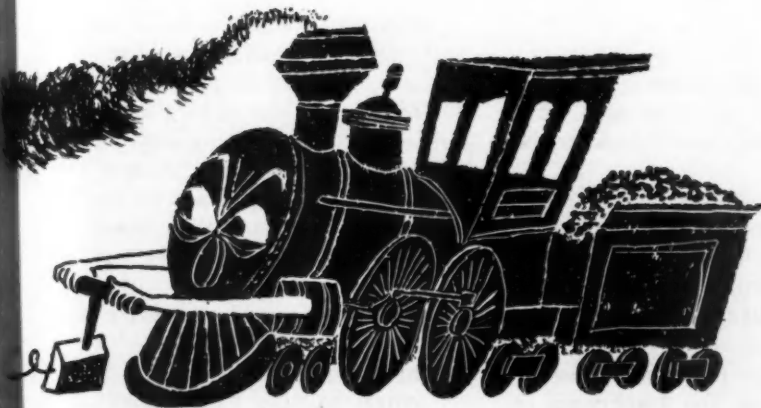
Motor *contract carriers* would be defined as those who provide motor transportation of property or passengers other than motor common carriers "... on the basis of bilateral contracts for specialized or individualized service or services equivalent to bona fide private carriage by motor vehicle."

Private carrier by motor vehicle would be defined as those not included in the definitions of motor common or contract carriers who transport by motor vehicle property "... of which such person is the owner, lessee, or bailee: Provided, That such ownership, lease, or bailment was not undertaken for the purpose of such transportation."

"Primary Business"

Provision is made in the proposed legislation for carriers affected by the new definitions to obtain from the ICC authority to operate as common, contract or private carriers in accordance with the new definitions. For example: A person presently operating as a private carrier who does not qualify under the new definition of private carriage

(TURN TO PAGE 120, PLEASE)



Air Breakaway Systems and Their Applications



V OF THE SEVEN available breakaway systems there are but two mechanical principles involved.

1. A valve held open by pressure and closed by a spring, and
2. A valve held open by pressure and closed by that same pressure when a pressure differential occurs due to pressure spillage.

Within these two general types there are seven individual systems which include four piping variations.

Piping Plan No. 1

Two manufacturers have elected to pass both lines through a sort of double valve which contains two separate passage chambers and with each passage chamber containing its separate shut-off, Fig. 2. Both offer tractor protection valves which are opened by pressure introduced through an auxiliary valve located in the cab. This method requires the additional piping from the reservoir via the control valve and back to the tractor protection valve.

Both of these units cause some delay in normal trailer braking because both provide changes in direction and in cross section of the application line as it passes through

en route to the trailer. These irregular inner cavities also offer some opportunity for the accumulation of ice.

The version offered by one manufacturer is the only fully manual breakaway device in common usage. It has the advantage of being somewhat faster than shut-off cocks.

With this control valve in its normal setting, reservoir pressure operates against the diaphragm to

An Industry Problem

For some time, many segments of the trucking industry have been studying means of providing auxiliary braking for vehicle combinations so that, in event of a failure at any axle, brakes on all other axles (excluding the front) would be effective.

It was hoped that a full progress report on recent studies by AMA and TTMA would be available at this time. However, the situation has recently been complicated by the fact that ICC is desirous of having all types of brake systems (as opposed to air alone) covered by such an emergency system. Automatic application (as opposed to manual) has also been specified in a recent subcommittee hassle.

Meanwhile ICC hopes to have a proposed regulation requiring such an emergency system ready soon for study by the industry and subsequent adoption within the year. It will probably become effective for new combinations made after Sept. 30, 1956. Later the studies will be continued to provide similar equipment for single unit vehicles.

Truck and trailer manufacturers are presently submitting designs to meet the expected requirement. Commercial Car Journal will provide complete details and specifications as soon as the results of the studies are made available.

By Homer T. Seale

Homer T. Seale, Inc.

overpower the spring and force both poppets into their open positions.

When the control valve is moved into the emergency position the pressure on the diaphragm is relieved, giving the spring opportunity to close the poppets. This emergency setting also vacates the trailer supply line to set up trailer emergency brakes. With the control valve in the normal setting the tractor protection valve will close should the reservoir pressure get down to about 30 lb.

This same manufacturer publishes (TURN TO PAGE 146, PLEASE)

Here are
for prot
trailer b
systems



1



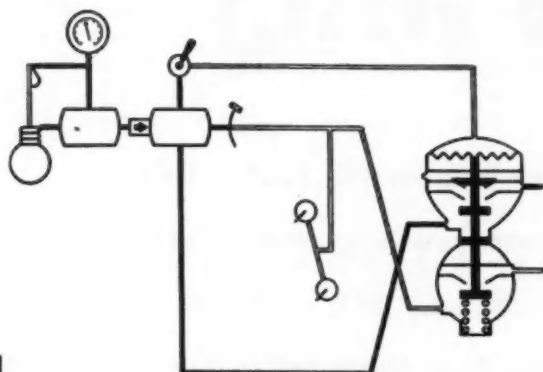
3



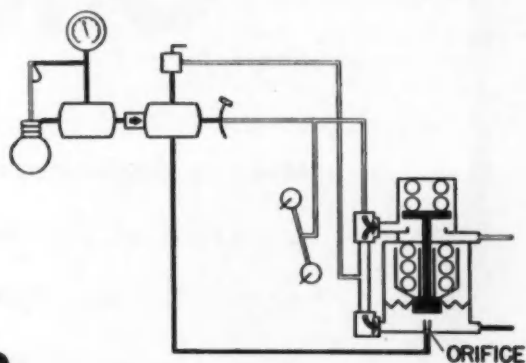
5

Here are seven available braking devices for protection of equipment in event of trailer breakaway. Four different piping systems are described and illustrated

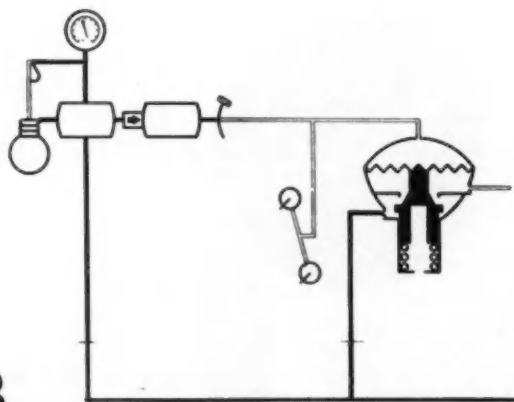
1. Schematic diagram of a basic air brake system.
2. Piping plan 1 uses a double valve containing separate passage chambers with individual shut-offs.
3. Variation of this uses pressure from cab through a one-way check to the emergency line. Loss of pressure permits diaphragm to overpower spring to close valve. Second spring closes application line.
4. Piping plan 2 uses a relay valve in application line with diaphragm which blocks tractor application line on its way to trailer.
5. Piping plan 3 makes use of a shut-off valve in supply line to prevent spillage from the tractor.
6. Piping plan 4 utilizes a cab control valve which takes the place of the trailer supply line. It is manually opened and closes automatically.



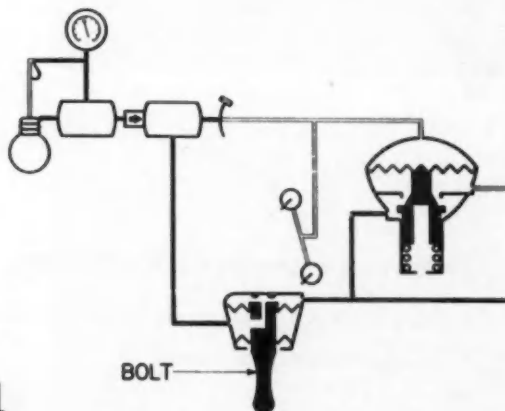
1



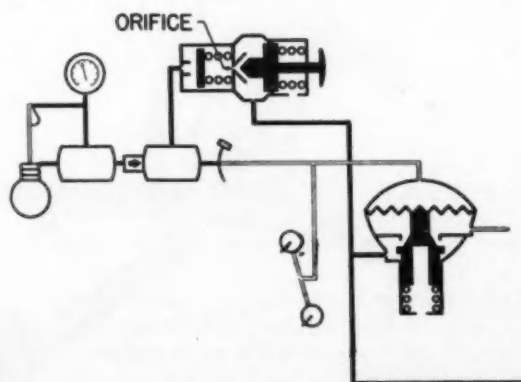
2



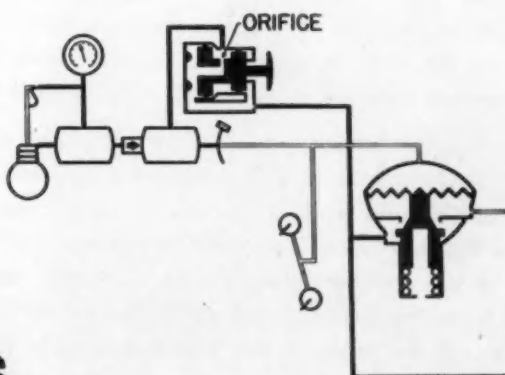
3



4



5



6



\$10 →

Shop Hints

Make a simple drawing of your home-made tools. Take a picture of the shop equipment you have built. Send us a brief description. We will pay \$10 and \$25 to those who submit good ideas for improving maintenance

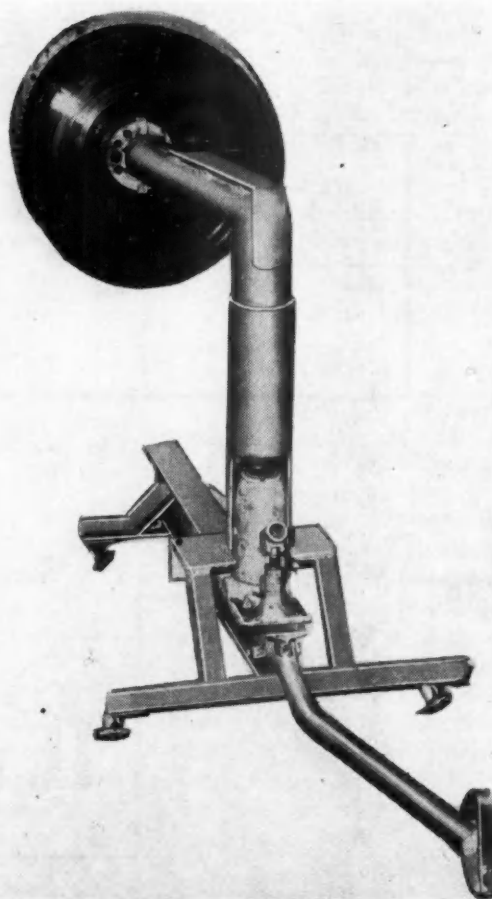
↓
\$25
↓

Lift Eases Flywheel Handling

By Clifford P. Ballard, Shop Foreman
Hudson Transit Lines, Mahwah, N. J.

The purpose of this lift is to remove fly wheel assemblies from GMC 6-71 and 4-71 diesel-engine buses. These, as the men who handle them know, are very heavy, bulky and sharp. If dropped, it can cause serious injury to the person handling them as well as to the unit itself.

To avoid this hazard, I have constructed this simple but efficient dolly, used with a common hydraulic jack, and it has become a useful item in our shop. The telescoping support makes it possible to raise or lower the boom to the necessary height. The crankshaft can be turned from the opposite end of the engine to line up the holes. If the engine is not turned over while the fly wheel is off, it can be replaced without turning the engine and the holes line up perfectly.



Cle

Here is
handle an
its back.
that feed
brush must
to oil stock

Hoo

By L

This elec
The ATA
transforme
stop light.
mechanic

Bra

We salv
worn throu
egg-shape
braze it i
brass can
again. In

Bra

Fr

Trucks i
220-volt li
less. Whe
and drive
cord. Ther
plugs and
keys are n
for the nig
ring and t
connect th
the truck.

Port

By G

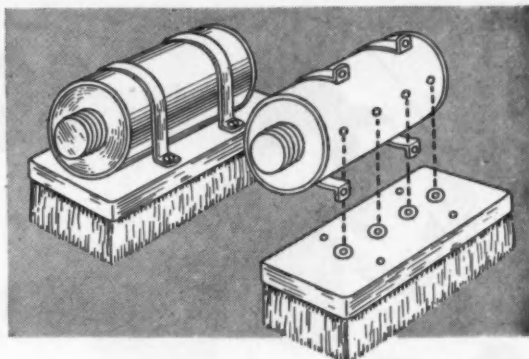
This all-i
the engine
rebuilding
easily port
to eliminat
and was m

COMMERCIAL

Cleaning Fluid Feeds through Brush

By Charles H. Willey, Penacook, N. H.

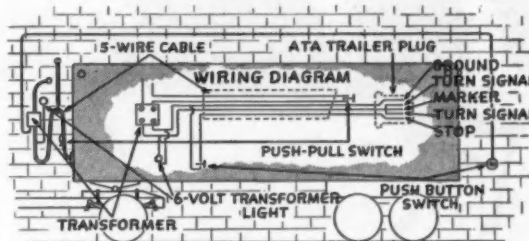
Here is an easily made self-feeding cleaning brush. It is easy to handle and carries its cleaning fluid supply in a can attached to its back. The can and back of the brush have a series of holes that feed liquid through the brush. Holes in the back of the brush must be countersunk. The same arrangement can be used to oil stock.



Hook Up Speeds Trailer Lamp Check

By Lee Miles, Wilson Freight Forwarding, Cincinnati, Ohio

This electrical hook-up speeds our final check on trailer lamps. The ATA trailer plug is connected to the trailer socket and the transformer turned on. This turns on all trailer lights except the stop light. After checking the front and rear running lights, the mechanic pushes the switch on the wall to check the stop light.



Brazing Extends Spring Hanger Life

By Preston R. Coleman, Norristown, Pa.

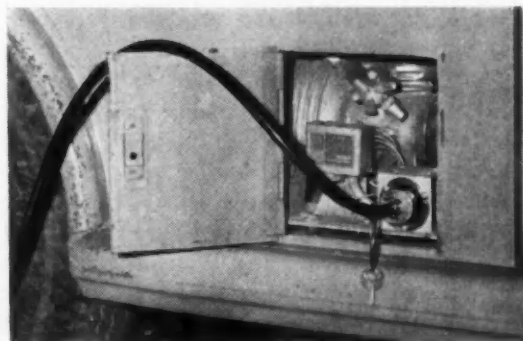
We salvage spring shackle hangers where the shackle pin has worn through the bushing and into the shackle making an egg-shaped hole. We press a new bushing into the hanger and braze it in. The next time the hanger requires rebushing, the brass can be melted out, and the hanger rebushed and brazed again. In this way, we get service out of a hanger many times.



Brass Ring Eliminates Cord Damage

From the shops of Chapman Dairy Co., Kansas City, Mo.

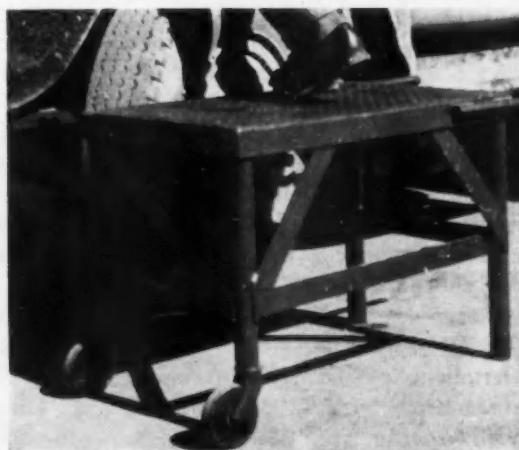
Trucks in this refrigerated fleet are connected to a shop 220-volt line at night to keep body temperature at 40 deg or less. When the system was first used, drivers would often forget and drive the trucks out without first disconnecting the 220-volt cord. There was an expensive repair problem with broken cords, plugs and receptacles. This has been eliminated. All ignition keys are now placed on brass rings, and, when parking the truck for the night, the driver runs the electric cord through the key ring and then plugs his truck in. In the morning, he has to disconnect the cord before he can get the ignition key to start the truck.



Portable Stand Improves Accessibility

By George Favinger, State Roads Commission, Easton, Md.

This all-iron combination work stand and welding bench makes the engine more accessible, can be used for such other work as rebuilding transmissions or differentials. The two wheels make it easily portable. Top of the stand is made of 1/4-in. diamond plate to eliminate danger of slipping. It is of all-welded construction and was made from scrap.





1955

Highway

Forty-four state legislatures met this year, passed a host of laws that affect your fleet operation. Here's a quick, easy-reference summary of what they did

NEW LAWS affecting bus and truck fleet operation resulting from the legislative sessions in the various states this year show the beginning of a trend toward reasonableness and more understanding of the fleet operator's problems. This is most apparent in legislation affecting sizes and weights, reciprocity and pro-rata fleet registration.

Of the 44 states that met in regular session in recent months (Louisiana held a special budget session), all have adjourned except Alabama, Delaware, Massachusetts, New Hampshire, New Jersey, Pennsylvania and Wisconsin. These legislatures recessed during the late summer, will convene again in the early fall.

Sizes and Weights

As shown in the chart at right and summarized below, there were several liberalizing changes in state size and weight limits.

Bills pending in Alabama would replace the weight formula with a table of weights based on axle spacing and increase the length of a tractor semi-trailer combination from 45 to 50 ft.

Arkansas and Indiana increased height limit from 12½ to 13½ ft, and Wyoming from 13 to 13½ ft.

By Arthur C. Butler,

Director

National Highway Users Conference

Colorado increased width for buses from 96 to 102 in.

Idaho changed its table of weights to increase maximum gross weight from 72,000 to 76,800 lb. This law, also, provided special limits for vehicles hauling logs, aggregates, cattle and farm products graduated from 37,800 to 79,000 lb. Another law in Idaho and laws in Montana and Wyoming permit buses of 102 in. width to operate on highways with a surface width of at least 20 ft.

Idaho, New Mexico, Washington, and Wyoming all passed laws to permit combinations consisting of tractors, semi-trailers, and trailers; and Arkansas repealed its restriction on number of units.

Kansas now permits buses used in local urban transit a width of 102 in.

Massachusetts permits Metropolitan Transit Authority buses a width of 102 in. Texas permits such buses in cities of over 425,000 population, and North Carolina permits them in Charlotte.

Minnesota permits buses of 102 in. in width to operate within

twenty miles of the boundaries of first-class cities. Another Minnesota law permits automobile transporters a height of 13½ ft.

New Hampshire increased gross weight from 50,000 to 66,400 lb based on tables of axle spacing, and increases single axle limit from 22,000 to 22,400 lb.

New Mexico permits buses 102 in. width on highways designated by the Highway Commission, increased height limit to 13½ ft and gross weight from 76,800 to 86,400 lb. This law, also, increased axle weight from 18,000 to 21,600 lb.

Pennsylvania increased weight for truck tractors and single-axle semi-trailers from 45,000 to 50,000 lb and the weight for a truck tractor and two-axle semi-trailer from 45,000 to 60,000 lb. Axle weight was increased from 20,000 to 22,400 lb.

North Dakota now permits three-axle trucks a length of 40 ft.

Illinois, North Dakota, and Texas increased length of combinations from 45 to 50 ft.

Vermont increased the weight allowed for a tandem-axle semi-trailer from 50,000 to 60,000 lb.

Washington increased weight

(TURN TO PAGE 82, PLEASE)

STATE

Ark.	a	
Calif.		9
Idaho	d-t	9
Ill.		
Ind.		
Kansas		9
La.		
Md.		
Mass.		9
Mich.		
Minn.		9
Mont.		9
N. H.	r	
N. J.		
N. M.	s	9
N. C.		9
N. D.		
Ohio		
Pa.		
Texas		9
Vt.		
Wash.		
Wyo.		9

ABBRE

NP—Not permit

NR—No restric

NS—Not specifi

a—Solid tires p

b—Plus weight

vehicle.

c—Buses permit

subject to va

d—Table of ax

from 37,800

vided for ha

gates, cattle

and a 5 per

wheel and ax

e—40-ft, two-ax

on highways

of Highway

Graduated

widths.

f—Automobile

hay or stra

13½ ft.

User Legislative Roundup

State Size and Weight Limit Revisions

STATE	SIZE RESTRICTIONS						GROSS WEIGHT		(See NOTE)	PRACTICAL GROSS WEIGHT LIMITS (In thousands of pounds)									
	Width (Inches)	Height (Feet)	LENGTH				(LEGAL LIMITS)			Below Limits Apply to Pneumatic Tires Unless Otherwise Specified									
			Single Unit	Tractor Semi-Trailer	Other Combinations	Number of Trailers (Semi-Trailer— $\frac{1}{2}$)	Minimum Tandem Axle Spacing	Pounds Per Inch of Tire Width	Per Axle (1000 lb)	Tandem Axles 4 feet apart (1000 lb)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wheel Tractor 2-Wheel Semi-Tr.	4-Wheel Tractor 4-Wheel Semi-Tr.	6-Wheel Tractor 4-Wheel Semi-Tr.	4-Wheel Truck 4-Wheel Trailer	4-Wheel Truck 6-Wheel Trailer	6-Wheel Truck 4-Wheel Trailer	6-Wheel Truck 6-Wheel Trailer
Ark.	a	13 $\frac{1}{2}$				NR													58b
Colo.	96c																		
Idaho	d-t	96c	35e					800f						76.8		76.8	76.8	76.8	76.8
Ill.				50	50														
Ind.		13 $\frac{1}{2}$																	
Kansas	96c																		
La.								450											
Md.		12 $\frac{1}{2}$ g																	
Mass.	96c																		
Mich.		12 $\frac{1}{2}$ h																	
Minn.	96c	12 $\frac{1}{2}$ i																	
Mont.	96c																		
N. H.	r						NS	600	22.4	36m	33.4	40k	52.8	66.4	66.4	66.4	66.4	66.4	66.4
N. J.								800											
N. M.	s	96c	13 $\frac{1}{2}$			1 $\frac{1}{2}$		21.6	34.3	43.2	55.9	64.8	77.5	86.4	86.4	86.4	86.4	86.4	86.4
N. C.	96c																		
N. D.			40n	50	50									61.5p	61.5p	61.5p	61.5p	61.5p	61.5p
Ohio				50										69.5	71.0p				
Pa.								22.4			33u	47u	50u	60u	60u	62u			
Texas	96c			50	50														
Vt.														60	60	60		60	
Wash.		12 $\frac{1}{2}$ w				1 $\frac{1}{2}$										64	64	72	72
Wyo.	96x	13 $\frac{1}{2}$				1 $\frac{1}{2}$													73.9

ABBREVIATIONS

NP—Not permitted.

NR—No restriction.

NS—Not specified.

a—Solid tires prohibited.

b—Plus weight on front axle of vehicle.

c—Buses permitted 102 in. width subject to various limitations.

d—Table of axle spacing ranging from 37,800 to 79,000 lb is provided for haulers of wood, aggregates, cattle and farm products, and a 5 per cent tolerance on wheel and axle loads.

e—40-ft. two-axle vehicles permitted on highways designated by Board of Highway Directors.

f—Graduated according to tire widths.

g—Automobile transporter, baled hay or straw carrier permitted 13 $\frac{1}{2}$ ft.

h—Automobile transporter, hay, straw or boat carrier permitted 13 $\frac{1}{2}$ ft.

i—Automobile transporter permitted 13 $\frac{1}{2}$ ft.

k—Three-axle vehicles with drive on two rear axles permitted 47,500

lb GVW, otherwise 40,000 lb GVW.

m—Except on three-axle single units.

n—Vehicles over 35 ft in length must have three axles.

p—See table of Gross Weights Computed by Formulae, page 140, April, 1955, issue.

r—Gross weights graduated up to 62,800 lb for three-axle combinations and up to 66,400 lb for four-axle combinations.

s—Gross weights graduated from 34,320 lb with 4-ft axle spacing to 86,400 lb if axle spacing is 56 ft.

t—Gross weights graduated from 30,500 lb with 3-ft axle spacing to 76,800 lb if axle spacing is 56 ft or more.

u—Maximum shown—in practice, GVW depends on chassis weight.

w—Automobile transporters, covered vans and baled hay permitted 13 $\frac{1}{2}$ ft.

x—Buses, haulers of forest products and baled hay permitted 102-in. width subject to various limitations.

Shown above are the revisions to Commercial Car Journal's Size and Weight Chart appearing on pages 138, 139 and 140 of the April, 1955, issue. Changes indicated were made by the various state legislatures during this year's legislative sessions. Other data remains the same as in the earlier chart.



1955

Legislative Roundup

Continued from Page 80

for a two-axle trailer from 32,000 to 36,000 lb and also increased height to 13½ ft for auto transports and covered vans.

Motor Fuel Taxes

Increased gasoline taxes, as shown in the chart at right, in 14 states are expected to add approximately \$187 million to the users' tax bill with most of it to be used for highway improvement.

Tax rates on other motor vehicle fuels were also increased. In most states the increased rates correspond with gas tax rates; however, different rates will be in effect in Iowa (increased from 5¢ to 7¢), Montana (6¢ to 9¢), and Texas (6¢ to 6.5¢). Michigan increased the liquefied petroleum gas rate but not the diesel rate. Kansas increased its special fuel rate from 5¢ to 7¢ but retained the same gas tax rate.

In some states, portions of the tax rate were temporary and due

to expire. Such taxes were extended or made permanent in California, Iowa, Kansas, Nebraska, North Dakota, Oklahoma and Pennsylvania.

Gas Tax Increases

STATE	RATES	
	Old	New
Alabama	6¢	7¢
Connecticut	4	6
Georgia	6	6.5
Iowa	5	6
Maine	6	7
Michigan	4.5	6
Montana	6	7
Nevada	5.5	6
New York	4	6
North Dakota	5	6
Texas	4	5
Vermont	5	5.5
West Virginia	5	6
Wisconsin	4	6

Revisions to Safety Equipment Required and

Shown below are revisions to Commercial Car Journal's Safety Equipment Changes indicated were made by the various state legislatures in this year's

Jurisdictional Control Over Equipment	SAFETY EQUIPMENT																															
	TO BE MOUNTED ON VEHICLES																															
	HEAD LAMPS			TAIL LAMPS			STOP LAMPS			REAR REFLECTORS			CLEARANCE LAMPS			SIDEMARKER LAMPS			IDENTIFICATION LAMPS			DIRECTION SIGNALS			SIDE REFLECTORS							
	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color		Must Be Approved	Number	Color		Must Be Approved	Number (Sets)	Color		Must Be Approved	Number	Color		Must Be Approved	Number	Color		Must Be Approved
													Front	Rear			Front	Rear			Front	Rear			Front	Rear			Front	Rear		
Conn.						1f																										
Del.	NSa		N	1cv	R	N	R/A	N	2ub	R	N					N	4	A	R	N					NS	W/A	R/A	N	4	A	R	N
Idaho				1cv			R/A/Ye																		gg	R/A						
Ill.									2j				2h	Ye/A							3xh				NSa	NS		4x		A		
Ind.	NSa			1v			1f	R/A	2				4			N	4			N				NSf	W/A	R/A		4				
Iowa																																
Kan.																																
Mass.	gg		N			N	1	NSa	N			N																				
Mich.																																
Mont.				1cv			1	R/A	N	2e			4	A	R		4	A	R	N					NS	W/A	R/A	N	4	A	R	N
N. Y.																																
N. C.							R/A/Ye		2								4	A	R	Y						R/A/Ye		4	A	R	Y	
N. D.																																
Okin.				1cv																												
Utah				1cv																						W/A	R/A					
Wash.							1eq	R/A					A				4							NS	W/A	R/A		A				
W. Va.																																
Wyo.				1cv			R/A		2e				4z	A			4z	A	R	Y				NS	W/A	R/A						

/—when used between letters on numbers means "or", for example 2/4 means "2 or 4".
A—Amber. N—No. NR—Not required. NS—Not specified. R—Red. Y—Yellow.
Ye—Yellow. W—White. a—Prohibits red light visible from in front of vehicle. e—Tail

lamp or separate lamp shall illuminate rear license plate with white light. e—May be incorporated in tail lamp. f—Semaphores required on school buses. h—Number plate must be illuminated with white light. j—Also two yellow or amber reflectors on front on

Registration

Connecticut car registration fee of \$7 to \$

Georgia

fees from fee of \$ increase for and small tractors were increased per cent rated cap

Kansas

and revised schedule tractor-trailer 1956. Gr basis for range from der 4000 60,000 lb

Permit

Chart app legislative

REQUI

REAR VIEW MIRROR WINDSHIELD WIPERS

Number Must Be Approved Number Must Be Approved

1bb

1bb

1bb

1bb

1bb

1bb

1bb

1bb

1bb

1bb

1bb

Registration and Special Taxes

Connecticut changed passenger car registration fee from a range of \$7 to \$11 to a flat fee of \$8.

Georgia changed passenger car fees from a weight basis to a flat fee of \$5, provided a slight increase for smaller private trucks and smaller semi-trailers. Registration fees for common and contract carrier trucks and trailers were increased approximately 10 per cent for those up to 5 ton rated capacity.

Kansas repealed its ton-mile tax and revised its registration fee schedule for buses, trucks, and tractor-trucks effective Jan. 1, 1956. Gross weight is now the basis for computing fees which range from \$7.50 for vehicles under 4000 lb to \$825 for those over 60,000 lb, with trailers and semi-

trailers licensed separately at \$20 each.

Colorado further changed tax rates which became effective the first of the year. Effective April 1, the mileage tax rate became 0.8 mills per vehicle ton-mile, plus 2 mills per cargo ton-mile. The mileage tax now applies to vehicles weighing over 4500 lb instead of those weighing over 8500 lb. However, such vehicles now pay a \$17.50 annual registration fee, instead of one based on a schedule graduated to \$589. **New Mexico**, like **Kansas**, repealed its ton-mile tax in favor of higher truck and bus registration fees effective next January.

Idaho enacted new registration fees and a mileage tax to become effective next year. Passenger car fees were increased, with a new

top fee of \$17.50, and special attention was given to taxation of commercial vehicles over 16,000 lb GVW and to non-commercial vehicles over 24,000 lb.

Maryland postponed for one year increased registration fees for passenger cars and commercial vehicles.

Nevada increased fees for vehicles registered on a flat fee basis by 50¢ and by 5¢ for those on a per hundred weight basis. **Montana** increased truck and trailer fees effective January 1, 1956. A new method for registering 3-unit combinations was enacted and non-resident commercial operator single trip fees were amended.

Tennessee increased registration fees for all classes of vehicles by substantial amounts, but re-

(TURN TO PAGE 114, PLEASE)

Permitted on Trucks, Truck-Tractors and Buses

Chart appearing on pages 141, 142 and 143 of the April 1955, issue. legislative sessions. Other data remains the same as in the earlier chart.

REQUIRED																	PERMITTED														
TO BE CARRIED IN VEHICLES																	TO BE MOUNTED														
REAR VIEW MIRROR		WIND SHIELD WIPERS		DEFROSTERS		FIRE EXTINGUISHERS		LIQUID BURNING FLARES		ELECTRIC FLARES		REFLECTOR FLARES		FUSES		RED CLOTH FLAGS		LIGHT OR FLAG ON PROJECTING LOAD		AUXILIARY DRIVING LAMPS			FOG LAMPS			SPOT LAMPS			Driving Lights Permitted Lit At One Time	Jurisdictional Control Over Equipment	
Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Burning Time (Min.)	Number	Size (Square)	Light or Lantern	Flag Size (Sq.)	Number	Color	Must Be Approved	Number	Color	Must Be Approved	Number	Color	Must Be Approved			
								NR	N	NR		N	NR																Conn.		
																	2	12			1zz	NSa	N		NSa	N		NSa	N	Del.	
																										2			Idaho		
																			12							2	NSa			Ill.	
																						Y						Y		Ind.	
																		2												Iowa	
																														Kan.	
	1bb																													Mass.	
								N			N			N	3	R	15	12	12	24	3zz	NSa	N			2		N	4	Mich.	
																														Ment.	
															3	R	15	2			1			Z	NS	Y					N. Y.
																														N. C.	
																														N. D.	
																														Okl.	
																														Utah	
															3	R	15				3zz					2	NSa	Y		Wash.	
															3	R	15	2	12	1	12	3zz	NSa							W. Va.	
																												4		Wy.	

vehicle. q—Truck tractor must have a stop light mounted on front. v—Two on all new vehicles other than truck tractors after July 1, 1956 (Jan. 1, 1956, in Ind., Mont. and Utah. Aug. 26, 1955, in Okla.). w—New vehicles. x—Or ICC requirements. z—Clearance

and marker lamps may be in combination. **bb**—Windshield washers required on vehicles manufactured after Jan. 1, 1956. **gg**—White/amber/yellow. **zz**—Plus one auxiliary passing lamp.

New PRODUCTS

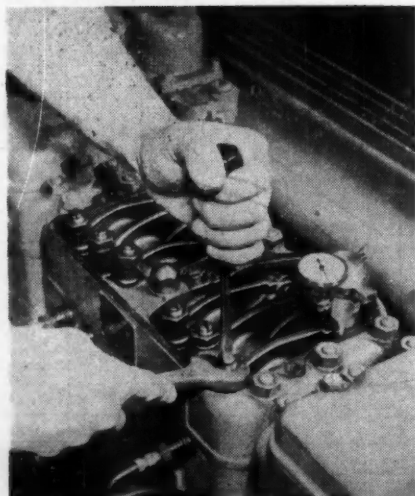
The latest developments in parts, accessories, tools and equipment for the fleet field, described in brief for your convenience

P1. Wheel Step

Power Brake Parts Mfg. Co., Chicago, announces a folding wheel step. It fits over the front wheel, permits the mechanic to stand high enough to reach over the fender to ease engine work. It will fold away into a compact size for easy storage.

P2. Valve Gappers

P & G Mfg. Co., Portland, Ore., announces two new valve-gappers, Model Nos. 212 and 213, designed specifically for Cummins diesel engines. The Model No. 212 is used on the H and J series Cummins engines and the Model No. 213 fits all NT and NH series engines. Both instruments utilize a patented method of measuring the exact valve clearance with a dial indicator which is graduated in .001 in. It permits a positive visual reading of the valve clearance before, during and after adjustment. Mechanic has both hands free to use adjusting tools and can make micrometer accurate adjustments on every valve without depending upon feel.



P3. Dump Body

Galion Allsteel Body Co., Galion, Ohio, announces a new tandem-axle trailer dump designed for use with single rear axle tractors. The new unit, designated as Model No. STM Transporter, is designed for use in localities where weight laws establish a medium gross weight limit and allow credit for only one set of tandem axles. Available body lengths range from 19 to 24 ft.

P4. Trackmeter

Performance Measurements Co., Detroit, has a trackmeter with a heavy duty 26-in. diameter wheel mounted in a rigid, tubular steel frame with a universal clamp for attachment to the vehicle bumper. The wheel is connected to a Weston Model 750 low ripple DC tachometer generator, effectively providing a constant velocity drive with zero back lash. Speed is indicated on a Weston Model 901 meter, calibrated in miles per hour. The fifth wheel may be used for the measurement of vehicle speed with an accuracy of 1/2 per cent. The wheel may be used with an accessory contactor for measurements such as total distance indicated on an electronic counter, miles per gallon of fuel indicated on a time and/or distance base with appropriate indicating equipment.

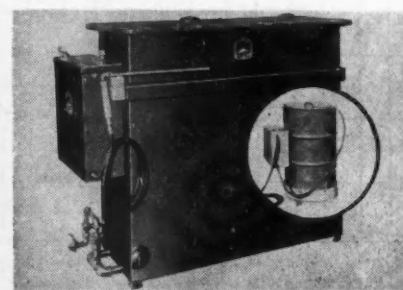


P5. Drying Oven

M & E Mfg. Co., Indianapolis, Ind., announces a new infrared paint drying system that utilizes tubular quartz lamps with special polished aluminum reflectors to eliminate "dead" spots. Mounted in ceramic heat insulators to protect electrical connections, the 1000 watt lamps with a life in excess of 5000 hours have individual low or high heat controls for localized drying. The unit consists of two vertical lamp banks and a horizontal lamp bank for drying tops, hoods, decks, etc. All are suspended from an overhead tram which traverses the length of the vehicle to be dried to eliminate the hazard caused by rails on the floor.

P6. Vapor Degreaser

Baron Industries, Los Angeles, Cal., has expanded its line to include two rectangular shaped vapor spray degreasers for larger sized parts and heavier work loads. These compact degreasing machines, fabricated of 12 gage and 3/16-in. plate for longer life, are protected against corrosion with a fused phenolic interior coating. Features include full water jacket offset coil condenser, manual spray equipment. They have unobstructed working dimensions of either 36 or 48 in. in length, width 18 in. and vapor depth 24 in.



P7. Valve

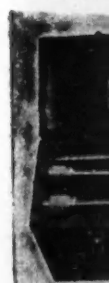
The Blackson, Md., Dupont Ty cleaners. 7 sized cleaner 1 1/16 in. all sludge hard to rea are claimed with no dan

P8. Mob

Allen B. Inc., Clifton multi-chann tion, comp providing t termination ignated as station, is c ments of a frequency-n at any pre 144-174 M unit is mu to four cha MC of can has accom Type 5856 taneous du termination eration thr telephone l transmittin

P9. Oil

Patton M is now man that remov 3/4 to 4 1/2 able on ore hammers which may according plete set i are remov proper siz is attached is inserted Next, the expanding snug in th taps of th removed v or surrou



P7. Valve Guide Cleaners

The Black & Decker Mfg. Co., Towson, Md., has introduced a line of Dupont Tynex Nylon valve guide cleaners. There are ten different sized cleaners, ranging from 1/4 up to 1 1/16 in. They are said to remove all sludge and varnish, even from hard to reach oil grooves. Also, they are claimed to polish and burnish with no danger of scratching.

P8. Mobile Radio

Allen B. Du Mont Laboratories, Inc., Clifton, N. J., announces a new multi-channel mobile radio base station, completely self-contained and providing transmission, reception and termination facilities. The unit, designated as the Type MCA-351-A base station, is designed to fill the requirements of a base station for two-way frequency-modulated communications at any pre-selected frequency in the 144-174 MC band. Feature of the unit is multi-frequency operation up to four channels, within a band of 0.5 MC of carrier frequency. The unit has accommodations for two Du Mont Type 5856-(a) receivers for simultaneous dual frequency reception. The termination panel permits remote operation through two-wire or four-wire telephone lines for both receiving and transmitting, as well as intercom use.

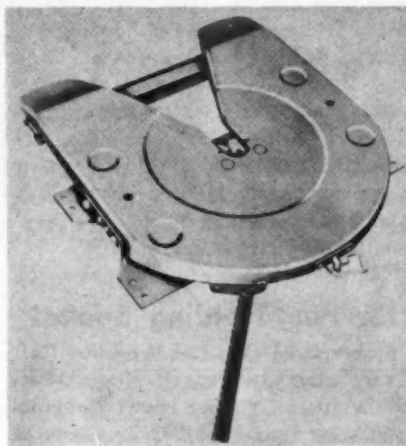
P9. Oil Seal Puller

Patton Mfg. Co., Springfield, Ohio, is now marketing an oil seal puller set that removes all sizes of oil seals from 3/8 to 4 1/2 in. Special sizes are available on order. The set consists of two hammers and six expanding heads which may be purchased separately according to sizes needed or as a complete set in a sturdy tool box. Seals are removed by first selecting the proper size head. Then the hammer is attached to the head and the head is inserted into the oil seal opening. Next, the hammer is screwed into the expanding head until the head is snug in the oil seal. Then, with a few taps of the hammer, the oil seal is removed without damage to the seat or surrounding material.



P10. Fifth Wheel

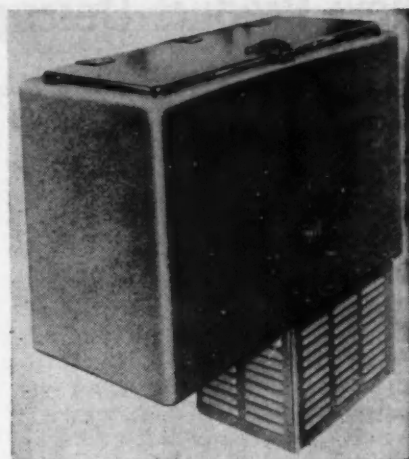
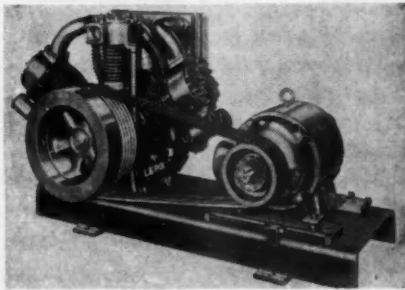
Fruehauf Trailer Co., Detroit, introduces this month a new, 36-in. pressed steel, low-silhouette fifth wheel. It achieves a great deal of strength and stiffness from structural design rather than use of heavy material. It is designed for up to 30,000 lb king pin load. Heavy-duty top plate is flanged around outer edges for stiffness. A striker plate transmits the king pin force to the structural parts relieving cam hooks from impact. Cross brace stabilizes the top plate when the king pin enters at an angle. Spring mounts, each with 25 sq in. bearing area are of chrome steel. Stainless steel is employed for the lock plunger spring not only for strength but also to avoid rust and corrosion.



The new unit is said to be nearly 60 per cent lighter than the former pressed steel design.

P11. Air Compressors

Le Roi Division, Westinghouse Air Brake Co., Milwaukee, Wis., announces a new line of two-stage, air-cooled, electric motor driven compressors. These new 50, 75 and 100 hp stationary compressors have displacements of 260, 415, and 550 cfm at 125 psi operating pressure. The new 3-cyl 50S2 shown above and 6-cyl 75S2 and 100S2 compressors are designed to reduce vibration and noise to a minimum. Cylinders are made of alloy iron, are cooled by a high-speed, belt-driven fan. Forced feed lubrication is accomplished by a positive plunger type oil pump.



P12. Frozen Food Cabinet

Quirk Mfg. Co., Cudahy, Wis., has just introduced its Model No. 708 frozen food cabinet for retail delivery truck mounting. With a capacity of 18 gal, this cabinet is designed for easy side mounting in most delivery trucks over the wheel housing. Units are compressor type that operate off any 110-volt circuit while the trucks are in the garage overnight. Long hold-over of sub zero temperature while the truck is on the route is possible through the use of an extra thick eutectic tank and special insulation—rot-proof and vermin-proof "Rubatex" insulation with a .21 K factor. Lid of the cabinet is of frost-free construction and is counterbalanced. The manufacturer has also introduced a 24-gal capacity unit for installation in Diveco trucks.

P13. Engine Preheater

Tech Products, Inc., Elizabeth, N. J., announces an internal combustion (diesel and gas) engine pre-heater. It features an automatic thermostatic cut-out which automatically shuts off the power supply when engine is properly heated. It measures approximate-
(TURN TO NEXT PAGE, PLEASE)



New Product Descriptions

Continued from Page 85

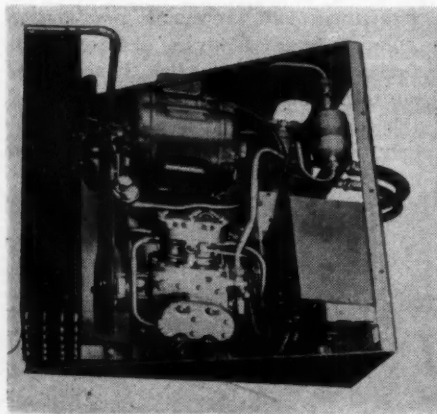
ly 3 in. in diameter and 8½ in. in height. It can be connected directly into the present cooling system, operates on 115/120 volts AC or DC.

P14. Pipe Wrench

The Stilsomatic Sales Corp., Washington 6, D. C., is offering a new pipe wrench instituting four features; (1) tubular steel construction, (2) automatic adjusting, rocking fulcrum action, (3) spring loaded hook jaw and (4) light weight. The rocking fulcrum action allows a number of different pipe fits with only one adjustment. For example a setting for a 1½-in. pipe will also accommodate 1¼ or 2-in. sizes.

P15. Loading Ramp

Globe Hoist Co., Philadelphia, announces its new "Trans-O-Matic" ramp, with built-in automatic "floating action." The ramp lip rides with fluctuating height of truck-bed as load weight changes. When not in use, the ramp can be positioned at platform level to permit normal dock cross-over traffic and heavy storage loads. An automatic safety switch under the ramp lip also locks the unit if the truck should pull away, thus preventing any sudden dip. It can be installed without ground excavation or piping.

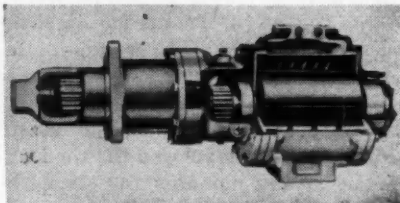


P16. Reefer System

Lehigh Mfg. Co., Lancaster, Pa., announces a new truck refrigeration system. Designed to meet the demand for fully automatic on-the-road and stand-by refrigeration in temperature ranges between 32 and 50 deg F. These new dual control systems consist of an engine mounted compressor

P17. Air Starting Motor

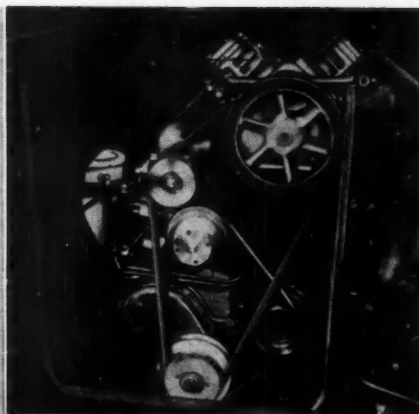
Bendix - Westinghouse Automotive Air Brake Co., Elyria, Ohio, is producing a new air starting motor, the "Startaire." They are of rotary multi-



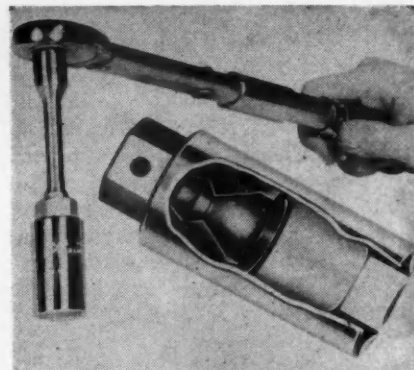
vane type design. They are equipped with a friction clutch and housing and are available as ready-to-install units, fully interchangeable with electrical starting motors. Two models cover a wide range of applications. The Model No. 15 cranks all engines up to approximately 1100 cu in. displacement and the Model No. 30 is recommended for larger engines.

P18. Plug-Holding Socket

Plomb Tool Co., Los Angeles, Cal., is marketing two spark plug sockets with a special rubber insert for holding plugs, thus provides a means of removing and installing plugs in the hard-to-reach places on many V-8 overhead valve engines. It also enables a user to change plugs without burning his hands on hot manifolds. One



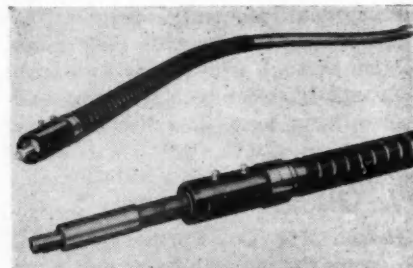
driven by a belt from the engine drive shaft (above, right), an electric standby unit mounted over the cab (above, left), and a choice of either a 2-hr hold-over plate blower with high capacity fan, or a blower-evaporator with multi-vane fans. Both are powered by Lehigh's 4-cyl, V-type compressor.



socket is for ¾-in. drive and has a 13/16-in. hex opening that turns 14 mm spark plugs. The other socket has the same opening size, but is for ½-in. drive. Both have a ¼-in. male plug at the top, which allows socket to be turned with an open end or box wrench. Extensions of various lengths can be used to reach otherwise inaccessible plugs on V-8 engines.

P19. Flexible Drive Shaft

Stow Mfg. Co., Binghamton, N. Y., has developed a new extra-heavy duty flexible shaft. It has a new heavy duty core 1¼ in. in diameter. This



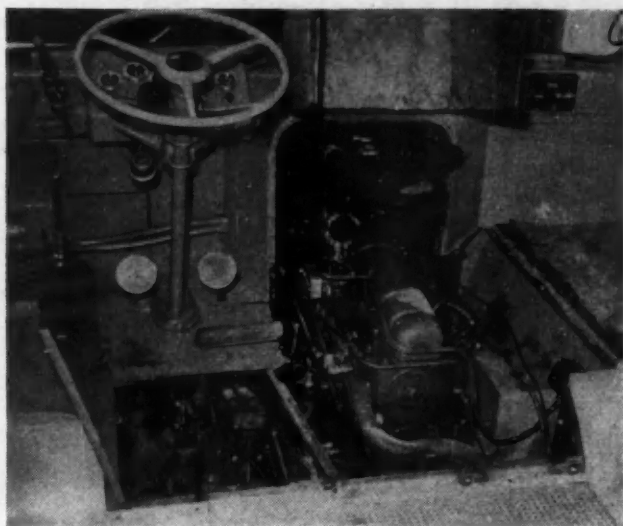
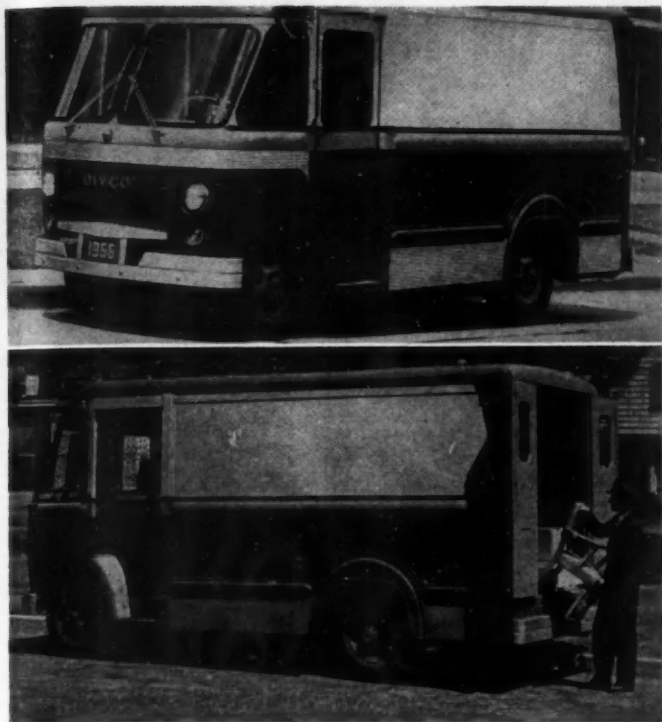
core is made up of layers of tightly wound music wire. With this core, the new flexible shaft can transmit up to 1650 lb in. of torque at 440 rpm. The flexible casing is lined with oil tempered spring steel, reinforced with wire braid, covered with oil resistant neoprene impregnated fabric and an abrasion resistant rubber jacket. The casing serves as the bearing surface for the core and also retains the lubricant. On applications where there is apt to be a change in length of the drive, square slip joints, 18 in. long, are available for connection at one end.

P20. Worm Gear

Little Giant Products, Inc., Peoria, Ill., announces a new worm gear winch incorporating a self-locking feature. There are no pawls or dogs to break, and there is no slippage when cranking. Designed for applications where loads of up to 2000

(TURN TO PAGE 172, PLEASE)

▼ DIVC
a new
stop del
"Dividen
such indu
sale florid
lar retail
new vehi
trol type
milk deli
The 13
weighs 5
8000 to
tires and



Above, left. Front quarter of the 130-in. wheelbase delivery model. At left. Side view showing new body lines and panel features. Above. Interior view showing complete accessibility to engine and transmission through the engine compartment door in the floor of the new models

New design forward-control truck of 8000 to 12,000-lb GVW features larger body with improved visibility and safety

Divco Offers the "Dividend" for Multi-Purpose Delivery

DIVCO Corp. has announced a new store-to-store and multi-stop delivery vehicle called the "Dividend" series. Designed for such industries as bakeries, wholesale florists, dry cleaners and similar retail delivery operations, the new vehicle is of the forward control type but larger than Divco's milk delivery models.

The 130-in. wheelbase pilot model weighs 5800 lb and has a GVW of 8000 to 12,000 lb, depending upon tires and springs. It is 18½ ft long,

has an overall height of 108 in. and is powered by a Divco Super 6 engine with a 4-speed synchromesh transmission. A 115-in. wheelbase model will also be available.

Optional features include split or drop floor forward of rear wheels, various types of rear doors, and extra capacity springs.

Wider Driver Vision

The new "Dividend" truck features a wide, deep windshield with visibility exceeding 200 deg. Added

safety has been achieved by increasing driver vision, almost to street level, immediately in front of the vehicle. A new method of springing and double-acting shock absorbers provide a smooth ride. Exceptionally maneuverable, even in narrow, sharp-turning alleys, the 12-ft body will completely turn around in a 38-ft street. New driver comfort has been provided by a specially constructed press-swivel driver seat.

(TURN TO PAGE 156, PLEASE)

Fleetman's LIBRARY

For free publications included in this list of new fleet maintenance and safety literature, use the reader service postcard

Tubeless Tire Manual

From Jack P. Hennessy Sales Co. comes this 12-page manual on servicing and repair of tubeless tires. It includes procedures for mounting, demounting, repairing of punctures and servicing blowout shields. Inside the first page is a list of 22 "Do's" and "Don'ts" for tubeless tire repair.

The brief but comprehensive text is fully illustrated with 35 well-chosen pictures. Fleetmen will be interested in the six ways of repairing a puncture presented in the manual. These are the gun method, outside plug method, kex plug method, cold and cushion gum patch, gun powder hot patch and dilectric hot patch.

For a copy of this manual for your files, circle L-1 on the postcard on page 84.

Diesel Engine Handbook

Just made available by Diesel Publications' Book Division in this 835-page reference book, the ninth edition of Diesel Engineering Handbook. It is edited by A. B. Newell.

Special feature of this new edition is the addition of new chapters and specifications on light-weight, high-speed diesel engines as used in "on" and "off-highway" trucks and buses.

The book has 30 chapters, reviews over 900 separate diesel topics. General headings include fuel injection systems, cooling systems, fuel oil, frame and cylinder maintenance, pistons and rings, crankshafts and bearings, valves, valve gearing and cylinder heads, supercharging, lubrication, lube oil systems, starting systems and specifications on over 1100 makes and models.

It is available at \$8.50 a copy from Book Division, Diesel Publications, 192 Lexington Ave., New York 16, N. Y.

Extinguisher Inspection Guide

Fleet shops are usually protected with fire extinguishers but often lack a standard for the inspection of these extinguishers. To remedy this lack, Buffalo Fire Appliance Corp. is offering free to fleet operators this handy, brief fire extinguisher inspection guide.

It is pocket-size and only four pages long, but it contains a wealth of inspection data for six most commonly used fire extinguishers—soda-acid, automatic clear water,

automatic non-freeze, pump tank, foam, vaporizing liquid, carbon dioxide and dry chemical. Under each type is a point-by-point check list for proper maintenance of the extinguisher.

For your free copy, circle L-2 on the postcard on page 84 in this issue.

Labor Forum Proceedings

Ready for distribution this month are the complete proceedings (250 pages) of the sixth annual Forum on Trucking Industrial Relations. Sponsored by the Industrial Relations Dept., American Trucking Assns., it is the complete record of the meeting held in June of this year.

Special topic reviewed this year was "The Impact of Health, Welfare and Pensions." Viewpoints from management, bankers, economists, union leaders, insurance companies and fund administrators are included.

They suggest answers to the problems of how these funds should be regulated, of administration of the funds, of the impact of the funds on labor, industry and the public, and in the development of a sound plan.

To get your copy, send \$10 to Industrial Relations Dept., American Trucking Assns., 1424 Sixteenth St., N.W., Washington 6, D. C.

Lift Truck Selection Guide

Hyster Co., Portland, Ore., is making available to fleetmen a comprehensive check list and comparison analysis for lift trucks. It covers 36 points under the major headings of performance, ease of operation, durability, serviceability, appearance and manufacturer's service organization. Provision is made to rate each model either by a general average rating or from a standpoint of the user's job requirements. There is also a general discussion of each of the main points as an aid in rating the lift truck.

For your free copy of this guide, circle L-3 on the postcard on page 84.

Commercial Motor Transportation

Here's the revised edition of "Commercial Motor Transportation" by Charles A. Taff. (The first edition appeared in 1950.) Dr. Taff is professor of transportation, College of Business and Public Administration, University of Md.

(TURN TO PAGE 166, PLEASE)

This 4-cu
5154 plate
Built by C
than a c
Right. Vi
showing t

New w
electro
provid
saving

By W

Welder
Alcoa 51
joint stro

COMMERC



This 4-cu yd body is made of alloy 5154 plate using 6060-T6 structurals. Built by Galion, it weighs 900 lb less than a comparable body of steel. Right. View of a large dump body showing the details of construction

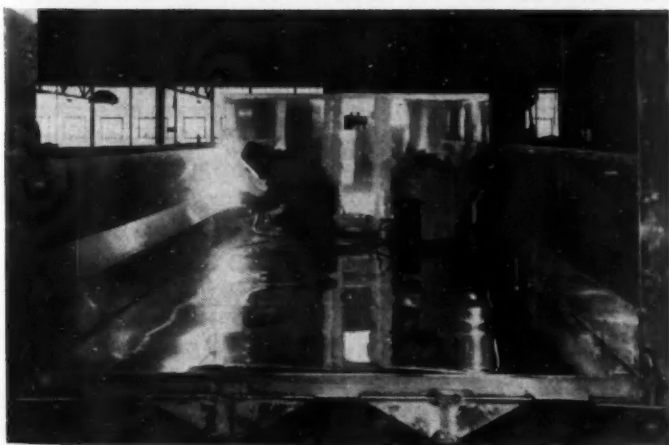


Aluminum Enters The Dump Body Field

New welding techniques along with improved electrodes speed fabrication with aluminum, provide for higher strength bodies. Weight saving of 50% over steel ups fleet profits

By W. C. Weltman, Jr., Aluminum Co. of America

Welder uses shielded arc, consumable electrode process on Alcoa 5154 high strength aluminum. Developments increase joint strength 25 per cent, ductility across welds 150 per cent



ALUMINUM has been finding continually growing use as a strong lightweight material for welded dump bodies, making possible additional profitable weight savings. Although the 50 per cent weight saving offered by aluminum has always been an important objective for dump bodies, certain problems have hampered the widespread adoption of light metal construction. Until recently, it was not always possible to achieve the desired strength in a welded aluminum assembly.

This deficiency, however, has been corrected by important alloy and process developments during the last year or two. As a result, welded aluminum construction is proving its ruggedness and durability in everything from 4-cu-yd utility dump bodies to 61-cu-yd bottom dump trailers.

New techniques with the inert-gas, shielded arc process allow welding speeds equal to those of the most advanced steel-joining methods. With this combination of a new alloy and new techniques, welded aluminum dump bodies are stronger and easier to make.

The use of welding for aluminum dump body construction began in 1948 with an experimental program carried on by Auto Truck Equipment Co., Pittsburgh, Pa. The body was built using alloy 6061-T6 sheet and structural shapes. All

(TURN TO PAGE 154, PLEASE)

Medical center provides effective, low-cost facilities for selecting and reclassifying drivers. Better safety records are a result

West Coast Safety Center Protects Fleet—and Driver



THERE'S DYNAMITE just waiting to explode into disastrous and costly highway accidents, in driver disabilities whose presence is often unsuspected by the drivers themselves despite ICC examinations by private physicians.

There's another charge of dynamite just waiting to explode beneath the truck fleet operator who decides to take unilateral action to expose the poor physical risks in his own organization. Understandable employee resentments may make the employer wish he had left not-too-well-enough alone.

And there's a delayed fuse charge of dynamite beneath the industry as a whole as long as operators continue to tolerate conditions that permit the existence of undetected serious physical disabilities.

That is the thinking behind the unusual driver examination program that is being spearheaded by the Washington Motor Transport Association with offices in Seattle, Wash. The program took definite

shape and substance with the establishment last year of the Washington Driver Safety Center set up as a joint enterprise with the Medical Examination Center in Seattle. Both "Centers" are located in the same building and in point of fact, the Driver Safety Center may be regarded as a branch or department of the Medical Examination Center.

The Center is the only organization of its kind in the country, according to R. E. Seth, M.D., who owns and operates it. It is an examination clinic only, so unlike other clinics it does not treat patients for disabilities detected. It was set up at a cost of \$200,000 with the best and most modern examining equipment. A staff of three doctors and five nurses and technicians are currently required to operate it.

Thorough Examination

Besides its ability to give as thorough and accurate an examination as any clinic in the country,

the Medical Examination Center is set up specifically to conduct industrial examinations with maximum efficiency, economy, and accuracy. It makes screening of personnel for specific disabilities that are crucial to a particular industry, as nearly error-proof as is humanly possible. It is able to test personnel with greater thoroughness than can a private practicing physician and at a lower cost for a comparably thorough examination.

The Center was not established to serve only the trucking industry, but truck fleet employees are one of the two major groups of industrial personnel whom it was set up to examine. In fact, without the sponsorship of the Washington Motor Transport Association as well as of the Joint Council of Teamsters No. 28, the venture would not have been undertaken.

The Examination Center could very well serve as a model for similar organizations in other parts of the country, it is believed. Its tie-in with the association

while re-
pendence
sirable
tional se-
son why
operatio-

One of
the Cen-
the tran-
W. Mac-
Pacific
land Mo-

Savings

"Then
sons wh
trucker
aminati
Mr. Ma
is accid
and sho
costs m
long-ter
this wi
since a
results

"The
workme
When t



By Edward R. Lucas

while retaining its financial independence is considered to be a desirable feature of the organizational set-up and an important reason why union and employee cooperation was forthcoming.

One of the original backers of the Center and active in affairs of the transport association, is John W. Macdonald, vice-president of Pacific Highway Transport and Inland Motor Freight.

Savings Possible

"There are two very good reasons why I and a number of other truckers wanted to see such an examination clinic started," explains Mr. Macdonald. "The first reason is accidents, which can be tragic and should be prevented even if it costs money to do so. However, the long-term results of a program like this will actually save us money, since a poor accident experience results in higher insurance costs.

"The second reason is our state workmen's compensation costs. When the manpower shortage was

severe during the war and shortly thereafter, we took a number of people into our organization who we later found were in poor health. Thus, a man with a bad knee would not tell us anything about it, but six months later would claim workman's compensation. Men with bad heart conditions that were not discovered before hiring in, could later claim that their condition was due to the work they did. Since the employer's taxes are tied directly to claims that are paid to his employees by the state, our costs for workmen's compensation taxes went up."

Of the 1000 employees of the two trucking organizations (which are mutually owned by the same individuals), about 400 are located in the western Washington area. Nearly all have been examined at the Medical Examination Center and will be re-examined every year. The truck drivers are of course required to take the visual-and-reaction tests as well as the general physical.

The importance of the type of physical testing service offered by such groups as the one described here is highlighted by the ICC Accident Report issued recently in which a vehicle under lease to Glenn Cartage Co., Girard, Ohio, collided with a bus and injured ten passengers, the bus driver and the truck driver.

It was found, the report said, that the driver of the tractor semi-trailer was suffering from diabetes and had blacked out when his blood sugar content became too low. Sec. 191.2(a) (2) of the ICC's regulations provide that "no person shall drive, nor shall any motor carrier . . . permit any person to drive . . . unless such person possess . . . no . . . organic disease, likely to interfere with safe driving."

Some heart conditions have of course been discovered, including one man who had finally to be released from the payroll. In some cases it is possible to change jobs for the individual, or to suspend him temporarily while he takes treatment. Some diabetics were also found in the PHT organization, who did not know they had the disability. That is one of the proscribed disabilities under ICC
(TURN TO PAGE 132, PLEASE)



You... and the

AMERICAN GAS ASSOCIATION EDISON ELECTRIC INSTITUTE

Superintendents of utility fleets face specialized problems which are not common to other types of fleet operation. For aid in solving these problems, they can turn to special divisions of the utilities' associations, the American Gas Assn. and the Edison Electric Institute.

While both associations are primarily concerned with problems peculiar to utility companies, such as production, distribution and customer services, they also include committees devoted to studying the effective use of motor vehicles in their organization. In these committees, fleet managers and superintendents are able to work together to solve their common, specialized problems.

Recognizing that many problems of fleet operation are common to gas and electric companies and that some utilities are combination electric and gas operations, AGA and EEI have established a program of joint meetings and projects in which members of both organizations take part. This cooperation strengthens the motor vehicle committees of both organizations, and eliminates duplication of efforts.

The accompanying article describes AGA and EEI activities in the field of effective fleet operation, and shows how committees of vocational associations can contribute to the solution of their industry's specialized fleet operation problems.

MOTOR VEHICLES are a secondary but important tool for gas and electric sales and distributing companies. Their major use: to get men and equipment where they're needed, when they're needed. To fill this role calls for adequately maintained, efficiently operated equipment.

Offering utility fleet superintendents an opportunity to take joint action on mutual problems concerned with efficient motor vehicle operation is an important function of the Automotive and Mobile Equipment Committee of the American Gas Assn., and the Transportation Committee of the Edison Electric Institute, national associations of the gas and electric utility industries. Faced with many similar problems, the fleet operator members of these committees work together on projects and hold joint meetings as part of the American Gas Assn.'s annual spring Distribution, Motor Vehicles and Corrosion Conference.

Objectives of both AGA's Automotive and Mobile Equipment Committee and EEI's Transportation Committee include: driver training and safe driving practices; standardization of truck body design; improved maintenance schedules; cooperation with national, state and municipal regulatory and licensing authorities; and economical application of motorized equipment. Organization of these committees is flexible, permitting formation of sub-committees to meet specific needs or to handle special projects, with the sub-committees then being dissolved when their work is completed.

Annual Conference

While sub-committees are active throughout the year, the chief project for the utility fleetmen is the annual spring conference. Held in conjunction with AGA's Distribution and Corrosion Committees, this

TENTH OF A SERIES

This is the tenth of a series of articles devoted to groups serving the highway transportation industry. The next article in this series will be devoted to local fleet supervisor organizations and maintenance superintendents' groups.

Utility fleet operators recognize the need for efficiently functioning equipment. In the AGA's Automotive and Mobile Equipment Committee and EEI's Transportation Committee they join forces to solve mutual problems, offer an example for other vocational groups.

conference provides utility fleet supervisors with an opportunity to hear presentations on latest developments by representatives of equipment manufacturers, to exchange problems and solutions in discussion sessions, and to get together with other men holding similar positions.

The conferences are usually scheduled over four-day periods, winding up with a visit to the fleet installation in the community at which the conference is held.

To help members keep in touch with new equipment developments affecting them, each conference program usually includes several speakers representing equipment manufacturers. In previous conferences these presentations have included such topics as: Use of LP gas for motor fuel; wheel alignment and its importance in fleet operation; new developments in fuel and lubricants and their application; brakes and braking performance; rubber and factors affecting tire mileage; more miles for the battery dollar; selection and application of winches and allied equipment; selection of aerial apparatus and related chassis; foldover derricks; paper and cotton filters; vehicle leasing; airless spray painting; and portable air compressors.

Discussion sessions, in which sub-committees make their reports and in which fleet men describe their own procedures also cover a lot of ground. Some of the topics discussed in recent conferences are:

1. Garage vs. Open-Air Storage.
2. Mechanization of Shops to Reduce Labor Costs.
3. Training of Equipment Operators.
4. Safety Awards.
5. Handling Driver Accidents.
6. Dynamometers and Their Value on Maintenance Work.
7. Water Filters for Cooling Systems.
8. Fender Flaps on Pole Trailers.
9. Employee Job Training Program.
10. Determining What Work Should be Farmed Out.
11. Selection of Proper Tread Design and Tire Life.
12. Ratio of Customers Per Unit of Transportation.

Sub-Committee Projects

Many projects are carried on during a year by AGA-EEI sub-committees. In recent years these have included studies of: the relative merits of compartment heaters; format and content of driver manuals; basis for comparing vehicle operating statistics; development of a simplified preventive maintenance system; methods for selecting, training and up-grading employees; mechanization of shops to reduce labor costs; and selection and application of specialized equipment, such as winches, hydraulic equipment, and aerial equipment. At present there are three sub-committees. These are: Vehicle Selection, Utilization and Retirement, Driver Training and Safe Operating Practices; Maintenance Practices and Facilities.

In these projects, sub-committees composed of men who are interested in, and familiar with the subject pool their ideas and experiences and draw conclusions which they offer for use by other members of the organization. The sub-committees are composed of members of both AGA and EEI and their chairmen and vice chairmen may belong to either organization.

The sub-committee reports, as well as many of the papers presented at the meetings are reproduced for distribution to members of the associations, and are also available for reference through the associations' library.

General Activities

The motor vehicle committees of both associations are only part of the associations' activities. In the American Gas Assn., the Motor Vehicles Committee is part of the Operating section. Other sections of AGA include: Accounting, Industrial and Commercial Gas, Residential Gas, and General Management. Included in the General Management section is an Accident-Prevention Committee which works in cooperation with the Operating section.

The EEI is similarly divided into Accounting, Commercial, Engineering and General sections, the Transportation committee being a part of the latter section.

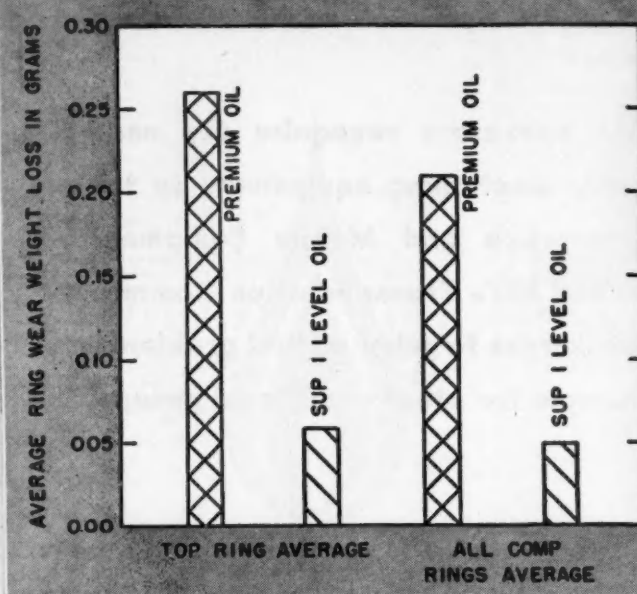


Fig. 1. Average ring weight loss on a large group of vehicles operating on two different types of oils in cold room test. Note effect on ring wear between the premium oils and the old Sup 1

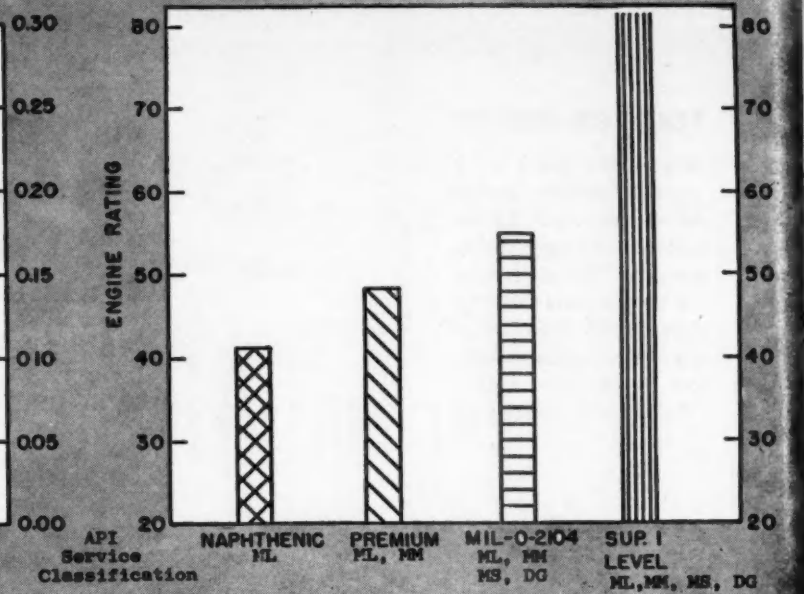


Fig. 2. Use of naphthenic oil resulted in an overall engine deposit rating of 41.8. Premium type—48.1, Mil level—54.7. Sup 1 detergent level—81.8. Tests showed the Sup 1 oil vastly superior

High Additive Oils and Modern

High additive oils with anti-wear agents cut deposits and wear. Multi-vis oils have

VAS CRITICAL engine features have developed in service, the oil industry has been asked, where applicable, to make quick fixes by improving or changing certain characteristics of the oil. In response, the lubricating oil manufacturer has been able to either eliminate or minimize most of the following difficulties:

Engine Deposits—Engine deposits such as clogged oil control rings, plugged oil screens and low temperature sludge, which are found in normal passenger car driving and in some light-load fleet operation, have been discussed at length for several years.

By William A. Howe
Gulf Oil Corp.

It is now believed to be almost universally accepted that the use of an oil with a detergent-dispersant level approximately twice that required by the military specification is very effective in minimizing these deposits.

Hydraulic Valve Lifters—When the first new type of hydraulic valve lifters were introduced, considerable valve lifter sticking was

experienced. This condition was occurring on the old premium type motor oil and the military level detergent oil which were then the only quality oils available at service stations. Experimental work indicated that some oils with old Supplemental 1 level detergency were almost 100 per cent effective in preventing hydraulic valve lifter seizure. It was not until the summer of 1951 that the first high detergent or true Supplemental 1 level oil was made available at service stations. Therefore, it was very frequently the practice, and in some cases advocated by engine manufactur-

Excerpted from a paper presented before the Cincinnati Section of SAE, May 23, 1955

Fig. 3. L consumption index SAE 20/20W

En

certain

ers, to a of suppl motor oil level to lifter st compani independ ers now either a mental l stations er sticki inated.

Piston Wear—A higher l in moto (TUR

COMMERC

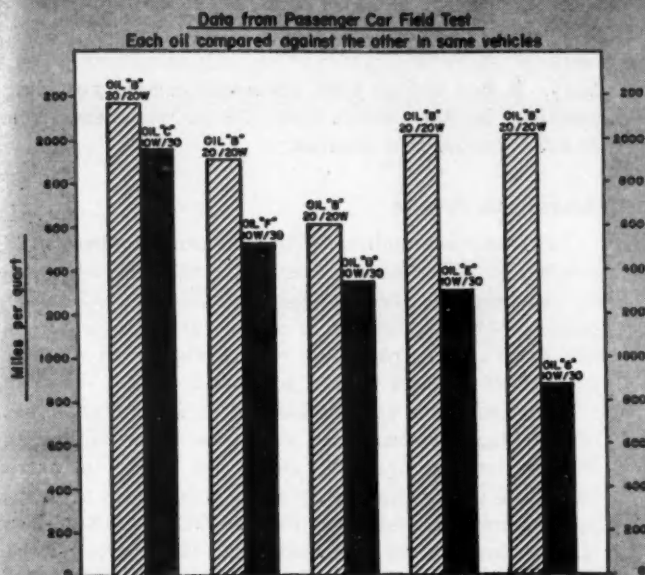
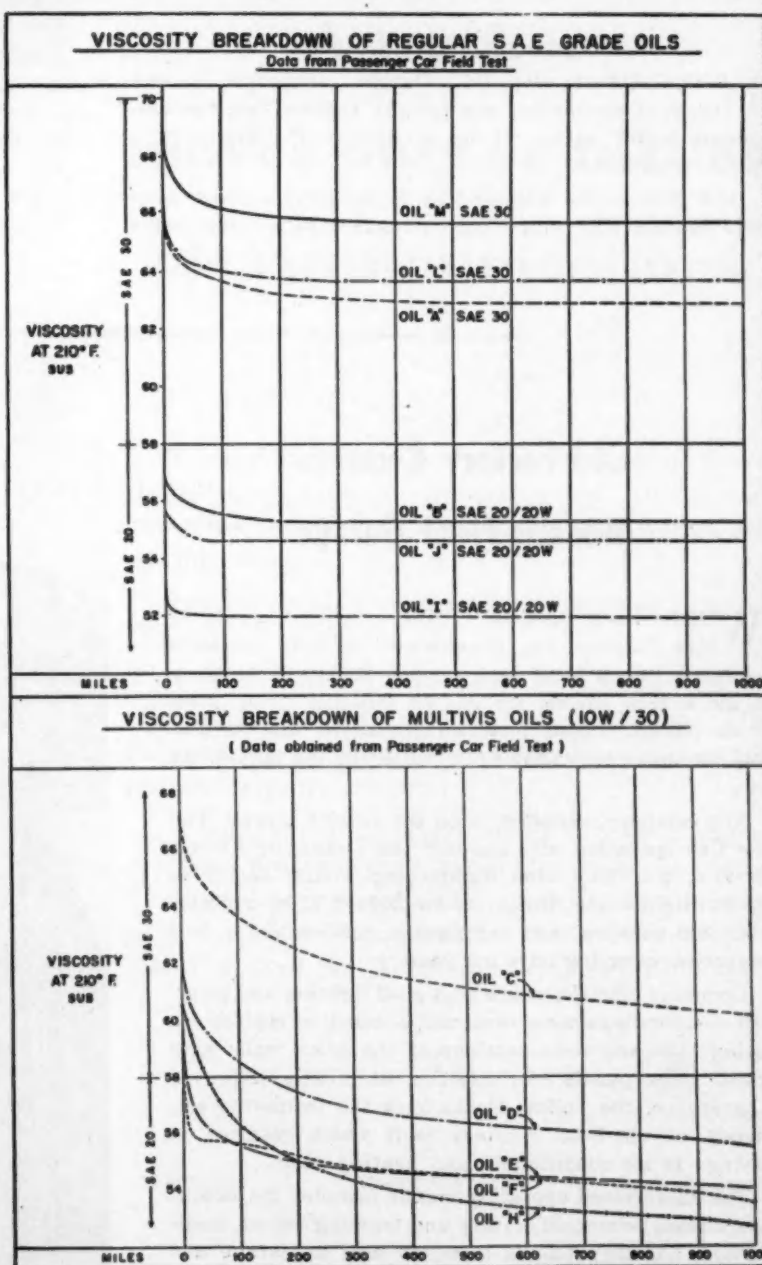


Fig. 3. Laboratory and road studies of oil consumption characteristics of high viscosity index SAE 10/30 oils as compared with SAE 20/20W oils with no viscosity improvers

Fig. 4. Natural SAE 30 oils show no appreciable break in viscosity at 210 deg F. when compared to the natural SAE 20/20W grades, but when compared to the SAE 10W/30 grades in chart below loss in viscosity is appreciably less

Fig. 5. Results of tests on five SAE 10W/30 oils. Four broke in viscosity at 210 deg F. The fifth oil had a sufficiently high initial viscosity at 210 deg F. that although it broke, it did not drop to the SAE 20 range as did the other four



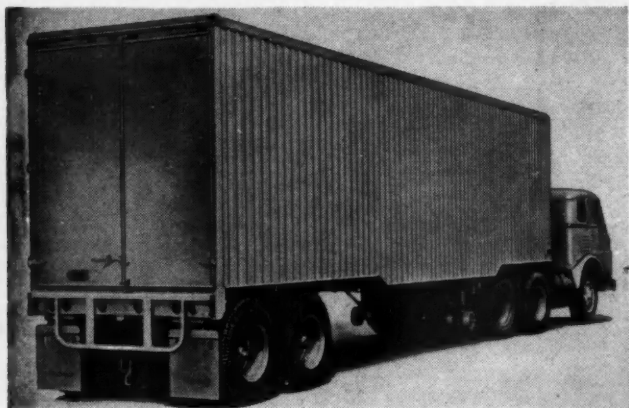
Engines

certain deficiencies

ers, to add various concentrations of supplemental chemicals to the motor oil at the service station level to minimize hydraulic valve lifter sticking. Many major oil companies and also many of the independent marketers and dealers now have a high additive oil either at or near the old Supplemental 1 level available at service stations and hydraulic valve lifter sticking has been almost eliminated.

Piston Rings and Cylinder Wall Wear—As a result of the use of higher levels of detergent agents in motor oils to minimize engine

(TURN TO PAGE 158, PLEASE)



Fruehauf's New "4000" Aluminum Van

FRUEHAUF Trailer Co., Detroit, announces a new standard production dry freight Volume-Van, the aluminum "4000" series. It has a capacity of 2,200 cu ft, is 93 in. wide inside.

The 4000 series Volume-Van is basically a 35-ft lube-free tandem with aluminum corrugated panel drop frame

body. It has sliding type underconstruction providing 13 positions for the tandem axle in 6 in. increments from 51 to 123 in. from rear bumper.

Aluminum Frame

The frame is aluminum with 8-in. crossmembers on 18-in. centers. One and one-half inch square steel tubing is employed over the rear sub frame with a 4 $\frac{1}{4}$ x 7-in. No. 3 gage steel box crossmember at the apron plate. Tire sizes are 10:00 x 20 12 ply duals. Air brakes with a 30 cu in. diaphragm 16 $\frac{1}{2}$ x 7 in. are employed.

Rear doors are 91 in. wide and 92 $\frac{1}{2}$ in. high. Because of the hinged construction they offer clear loading space without interference. The floors are 15/16 in. extruded aluminum with nailing strip at each side back of drop and $\frac{1}{8}$ -in. aluminum plate over the sub frame. A 3/16-in. aluminum plate will be furnished ahead of the drop. The drop in the floor is 4 $\frac{1}{8}$ in.

Plastic Corners

Side walls are aluminum with 6-in. spaced corrugation. The roof is also aluminum with coin pressed seam and plastic skylight in front corners. The rear corner caps are aluminum.

Roof bows are extruded aluminum on 18-in. centers. All wiring is plastic coated with junction boxes at east light, making all wiring accessible from outside.

For further information on the new "4000" series, circle P-36 on the postcard on page 84.

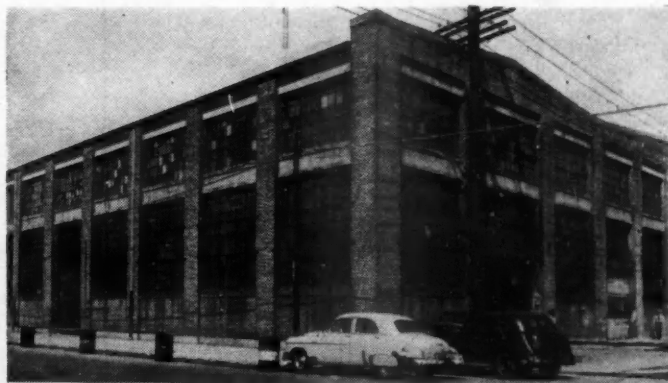
Old Factory Becomes Modern Fleet Garage

WHEN Toye Brothers Transportation Companies, New Orleans, La., consolidated its four operating locations into a block-long former industrial building, it did a face lifting job on the building using glass block panels. Upper picture right shows the "before" and the lower view shows the "after" of the remodeling job.

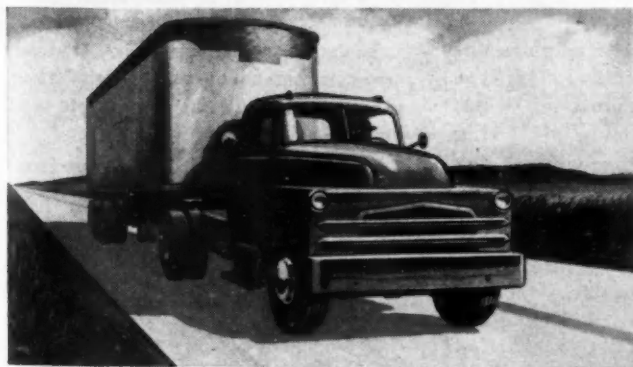
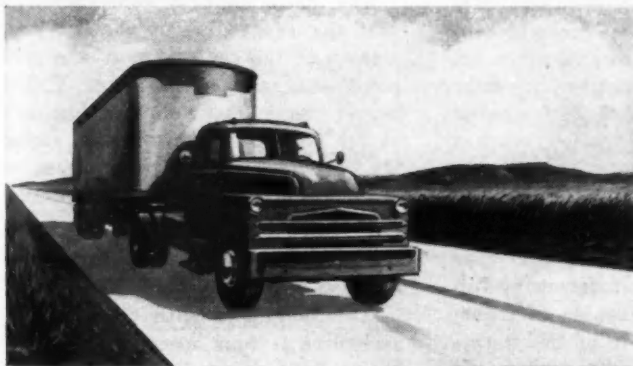
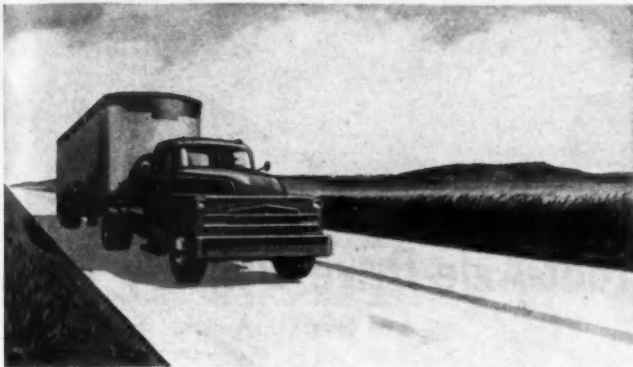
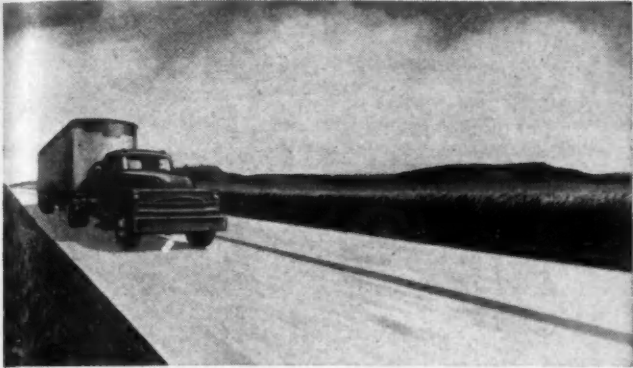
The company, reported to be the south's largest Yellow Cab operation, also includes the Limousine Airport Service, the Gray Line Sightseeing Tours, and Toye Bros., Sightseeing Tours. It employs 1100, operates over 300 vehicles, and averages a million and a half passenger-carrying trips per year.

Company officials, aware that good lighting and pleasant surroundings were essential, decided to replace existing sash and some sections of the brick walls with glass block panels. In addition to greatly improved appearance, the hollow blocks have the insulating efficiency of an 8-in. masonry wall which resulted in savings in air conditioning and heating costs.

The modernized operating center includes the executive offices, personnel testing and training offices, auditorium, and dispatcher's office, as well as garage and maintenance facilities.



(Advertisement)



A trucker moves only as fast as his communications

Because a trucking company can move no faster than its written or spoken word, the speed and efficiency of your communications system are all-important.

Is your problem dispatching? Handling reports? Centralized billing?

The Bell System can supply the specific type of communications you need for your operations. The result can mean substantial savings to you, speedier service for your customers.

A complete and careful survey of your communications problems and needs may indicate means by which the efficiency of your operations can be improved. This survey will be made at no cost to you. Call your Bell Telephone business office today.

BELL TELEPHONE SYSTEM



TELEPHONE

TELETYPEWRITER

MOBILE RADIO

Great Dane's All-Aluminum "Greater Cube" Trailer

A NEW "Greater Cube" light weight, all-aluminum, dry-cargo trailer has just been introduced by Great Dane Trailers, Savannah, Ga.

With a 94-in. inside clear width, the cargo carrier can be built with a capacity of up to 2300 cu ft. Another feature is the vertical outside post of special aluminum extrusions to relieve strain on side-sheets, protect the van from casual damage. Rubber-sealed doors assure positive - lock, water-tight protection, and built-in roof gutter carries water off.

Hard rubber bumpers absorb platform shock and protect the rear end of the Cargo Carriers. One pair of bumpers are mounted on a strongly-braced steel rear buck plate. Also, a steel ICC regulation bumper is standard equipment with each trailer.

The 18-in. front corner radius meets the recommendation of ATA standards and provides more useable space in the nose of the trailer, as well as more cab clearance.

Full-width, 96-in., upper 5th wheel plate provides any-angle coupling and positive approach hook-up. The king-pin features two additional square inches of shear area with 36-in. king-pin location as standard. One-piece aluminum top and bottom rails are provided for maximum rigidity.

Additional features of the Cargo Carrier include a "Glide-Ride" tandem with longer-spring tandem assembly construction. This tandem is unconditionally guaranteed for one year or 12,000 miles including parts and labor.

For further data on this new unit, circle P-40 on the postcard on page 84.



"Empire" Front-Axle-Drive Delivery Truck

G. A. EICHELBERGER Co., Oakland, Cal., reports development of its "Empire" front-axle-drive delivery truck. Elimination of drive line to rear axle and use of smaller diameter wheels on the rear permit a lower inside floor height.

The truck incorporates use of a double-yoke type universal steering-driving front axle. Eichelberger says it is a heavy duty unit driven by full floating axle shafts capable of transmitting the full torque of the engine and maintaining its full rated capacity.

The driving assembly employs the use of standard needle-roller type sealed bearings at points of wear. Adjustment of the Timken pivot king pin bearings can be done without dismantling the unit, being readily accessible from the outside.

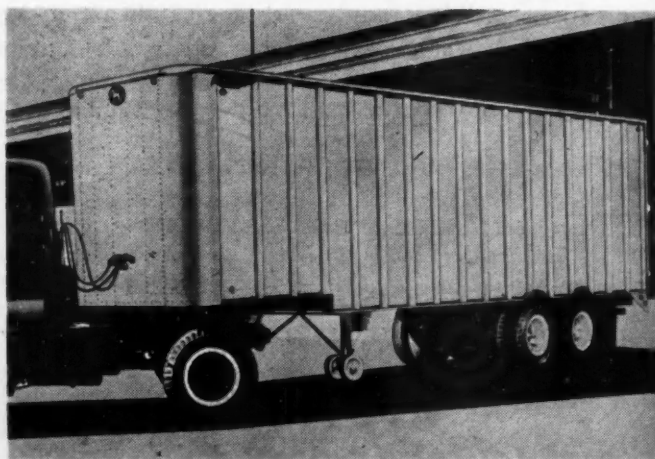
The drive unit is constructed so that the center-line of the tire coincides with the center-line of the pivot point for ease of steering. Eichelberger says the full floating axle shafts permits the front drive assembly to carry the same weight as on rear axle of a truck with conventional rear axle drive.

The drop frame model illustrated requires only one 12-in. step to enter.

It is available with 6-cyl engines and three or four speed synchro-mesh transmissions as well as Borg-Warner automatic transmission.

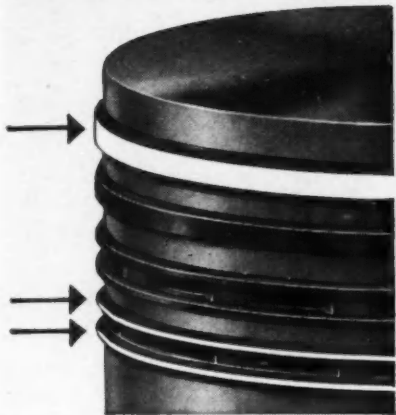
Eichelberger reports that the new truck is not a conversion job but engineered and built as a complete truck unit using standard parts.

For further details on this front-drive unit, circle P-35 on the postcard on page 84.

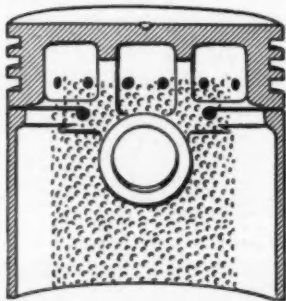


Full-Flow Spring

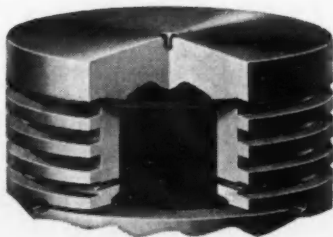
**EVERY RE-RING JOB
DESERVES ALL THREE...**



1. Kromex Ring Sets are the most economical, measured by miles. Factory-seated for instant oil control—chrome-faced top ring and oil ring side rails for longest wear.



2. Sealed Power SUPER-SIZER is the world's best resizing method, increases resiliency and outward tension on thrust faces, expands skirt to original close fit, leaves piston skirt surface smooth.



3. Sealed Power GI-60 Groove Insert is the only dependable, economical method of restoring top groove to original size and protecting against future wear.



Sealed Power KromeX

PISTON RING SETS...

assure your engine

- quick seating
- smoother performance
- faster pick-up
- double ring life
- maximum oil economy
- positive lubrication

assure YOURSELF

- lower cost per mile
- more miles of good service
- no come-backs

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING!

BEST FOR RE-BORE!

RINGS • PISTONS • PINS • SLEEVES • VALVES • WATER PUMPS

International Introduces... ... Four Wheel Drive

A NEW four-wheel-drive, light-duty truck (shown at right) with power and traction to travel cross-country fully loaded in mud, sand or snow has just been introduced by the motor truck divisions of International Harvester Co.

The new model, the R-120 (4x4), has a GVW rating of 7000 lb, and is offered in four wheelbases between 115 and 134 in. Designed with a minimum body and step height comparable to a standard truck, it is available with pickup, stake or flatbed body, or as chassis and cab for a special body.

In proving ground tests, the R-120 (4x4), fully loaded, climbed a 56 per cent grade handily. It can be operated on hard-surface roads as a conventional rearwheel drive truck, while the front axle drive can be engaged quickly and easily by a shift lever.

Transfer case of the new model, exclusively International's, has a high ratio of 1 to 1, or direct, and a 1.98 to 1 low range, providing, in combination with the standard three-speed



transmission, six forward and two reverse speeds.

For further data on the R-120 (4x4), circle P-39 on the postcard on page 84.

... Three New COE's

INTERNATIONAL Harvester Co. also has just introduced three new cab-over-engine models, the CO-180 series.

The three models are the CO-180 with GVW rating of 17,000 lb, the

CO-181 with GVW rating of 19,000 lb, and the CO-182 with GVW rating of 21,000 lb. They are available in 99, 111, 123, 135, or 153-in. wheelbase.

The CO-180 series, which is equipped with the cab, frame, and front axle of the CO-190, is powered by the 137-hp International Black Diamond 282 engine. Transmission is five-speed; rear axle is the R-180 single-reduction. Brakes are hydraulic.

For further data on this new COE series, circle P-38 on the postcard.

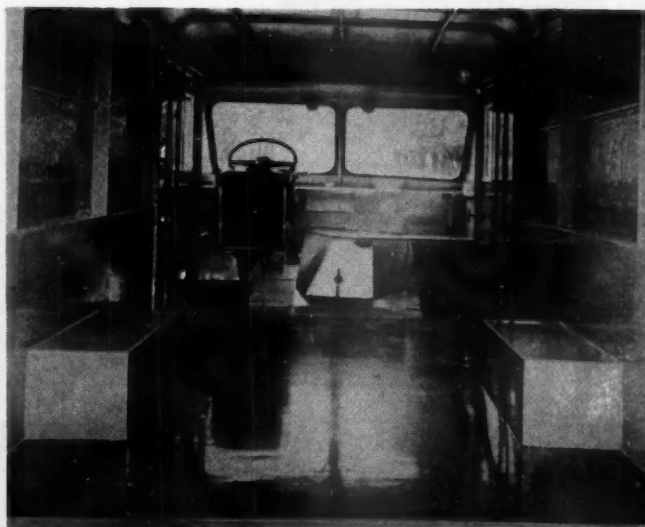
Montpelier's Plastic Milk Delivery Body

LIGHTER weight, greater insulation are two of the reasons given by the Montpelier Mfg. Co., Montpelier, Ohio, for its selection of reinforced plastic for the truck body design shown here. These multi-stop trucks for milk delivery also take full advantage of the material's rust and corrosion resistance to present an attractive appearance and help assure sanitary milk delivery.

Bodies designed to customer specifications are molded in "Plaskon" polyester resin reinforced with glass fiber.

The insulating effect of the glass fiber reinforced resin

is particularly important in the house-to-house delivery of dairy products. And in addition to savings made possible in refrigeration costs; lower body weight means less wear and tear on the vehicle. Savings on fuel consumption and maintenance costs can amount to a cent per day for every pound of weight saved. For further data on this plastic body, circle P-37 on the postcard on page 84.

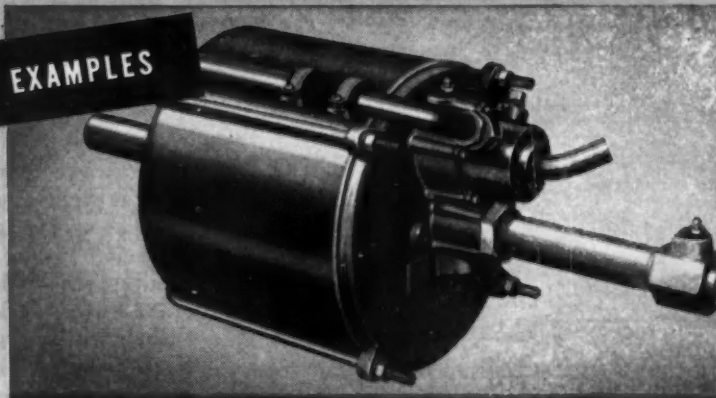


Bendix Products Division

A GOOD RELIABLE SOURCE FOR AUTOMOTIVE COMPONENTS



TYPICAL EXAMPLES



BENDIX LINKAGE TYPE POWER STEERING—Because Bendix* Power Steering is of the linkage type, manufacturers find it especially adaptable for production line installation without extensive engineering changes. Manufacturers can now meet the ever-increasing demand for power steering more efficiently and more economically with Bendix Linkage Type Power Steering.

BENDIX HYDROVAC POWER BRAKE—With over four million in use, the Bendix Hydrovac* is the world's most widely used power brake for commercial vehicles. This overwhelming preference for Hydrovac is a result of sound engineering design, exceptional performance, low original cost and minimum service upkeep. Make the industry's choice your choice.

*REG. U. S. PAT. OFF.

BRAKES • POWER STEERING • POWER BRAKING • CONSTANT VELOCITY UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS

BENDIX PRODUCTS SOUTH BEND INDIANA
DIVISION

Expert Sales: Bendix International Division, 203 East 42nd Street, New York 17, N. Y.

Bendix
AVIATION CORPORATION

SEPTEMBER NEWS ROUNDUP

ATA Backs Highways

"We agree completely with the President's stress on the national need for better highways as soon as they can be built," Neil J. Curry, President of American Trucking Assns., said last month. "We want the highway program, we need it as much as the motorist does and we are willing to pay for the modern system. This industry supported and will support not only the highway program but also any equitable tax program to provide the needed funds."

... Governors Do Too

The Governors Conference, at its 47th annual meeting in Chicago, reiterated its "approval and support" of a greatly expanded federal-state program for construction of interstate highways, terming the nation's highways "grossly inadequate." In a resolution, the Governors stated: "The 47th Annual Meeting of the Governors' Conference endorses and supports objectives of the highway building program which the President proposed to our Conference last year at Bolton Landing, N. Y."

... And Express Opinions

In discussions, Governor Walter J. Kohler, of Wisconsin, termed the failure of Congress to act on proposed

1955 Domestic Truck Factory Sales by G.V.W.*

	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
January.....	37,040	12,271	3,300	12,015	3,176	2,784	3,363	72,949
February.....	25,500	9,113	2,319	9,046	2,806	2,910	3,588	55,283
March.....	43,294	14,454	3,543	14,836	2,671	2,858	4,314	86,070
April.....	55,955	17,933	4,146	19,041	3,926	3,574	5,630	110,236
May.....	54,231	17,092	4,345	19,397	4,289	3,293	5,790	108,577
June.....	47,614	16,615	3,578	19,591	5,303	3,612	6,129	101,840
Total—6 Mos. 1955.....	263,634	87,478	21,229	92,925	22,156	18,640	29,432	535,494
Total—6 Mos. 1954.....	219,694	87,968	18,431	81,218	17,206	25,052	19,019	468,588

*—Automobile Manufacturers Association.

highway legislation a "tragic failure." He stated that construction of a modern interstate system is one of the "most vital tasks facing the nation" and said the President would be justified in calling a special session of Congress.

Governor Paul L. Patterson, of Oregon, urged that the program recommended by the Clay Committee be adopted—but completed over a 15 instead of a 10-year period and financed from federal automotive excise taxes. He said that he favored a "fair, across the board" increase in highway user taxes if necessary. Governor Patterson urged the governors to agree upon a plan and then go directly to Congress to get action. Governor Goodwin J. Knight, of California, concurred with this position.

Governor Leo A. Hoegh, of Iowa, opposed any increase in federal automotive excise taxes but urged that the Clay program be financed on a pay-as-you-go basis from the \$2.5 billion already being collected in federal automotive excises. He was supported in the view by Governor Charles H. Russell, of Nevada.

Governor Raymond Gary, of Oklahoma, said that the federal government should withdraw from the gasoline tax field and assume 90 per cent of the cost of the interstate system. He also recommended that the federal government guarantee the payment of a percentage of state toll road bonds in order to enable the sale of such bonds at lower interest rates. He favored a special session of Congress for highway legislation.

Governor William G. Stratton, of Illinois, said that some kind of federal highway program is vitally necessary

and declared that time is so short that he would like to see it on a five-year rather than 10 or 15-year basis.

Governor Theodore R. McKeldin, of Maryland, opposed any increases in federal automotive excise taxes. He favored the program and bonding provisions of the Administration plan.

Governor J. Bracken Lee, of Utah, urged that the federal road program be financed with monies now being used for foreign aid and from savings which can be effected by adopting the Hoover Commission recommendations on reducing government expenditures.

Governor J. Hugo Aronson, of Montana, opposed any increase in user taxes and supported the Clay Committee report.

Governor G. Mennen Williams, of Michigan, said that interest payments under the bonding provisions of the Clay report were "too high" and he objected to any increase in federal automotive excises.

During a panel discussion on intergovernmental relations, Governor Allan Shivers of Texas declared that the Bureau of Public Roads has carried out highway construction admirably over the years and expressed the opinion that the federal government could take care of the responsibilities for roads by increasing the amount of money spent under the present highway act.

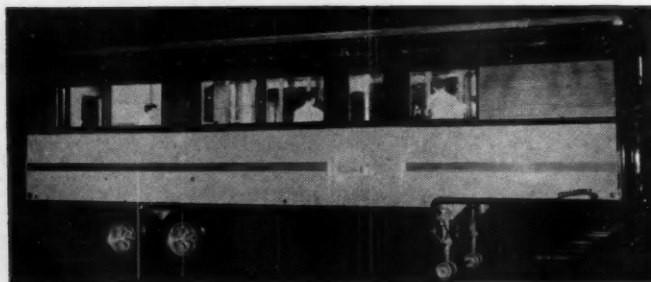
A Clarification

DuPont's Anti-Freeze Laboratory takes exception to the description of the anti-freeze analyzer as carried in last month's new product pages. Just in case readers might infer that the

(TURN TO PAGE 234, PLEASE)

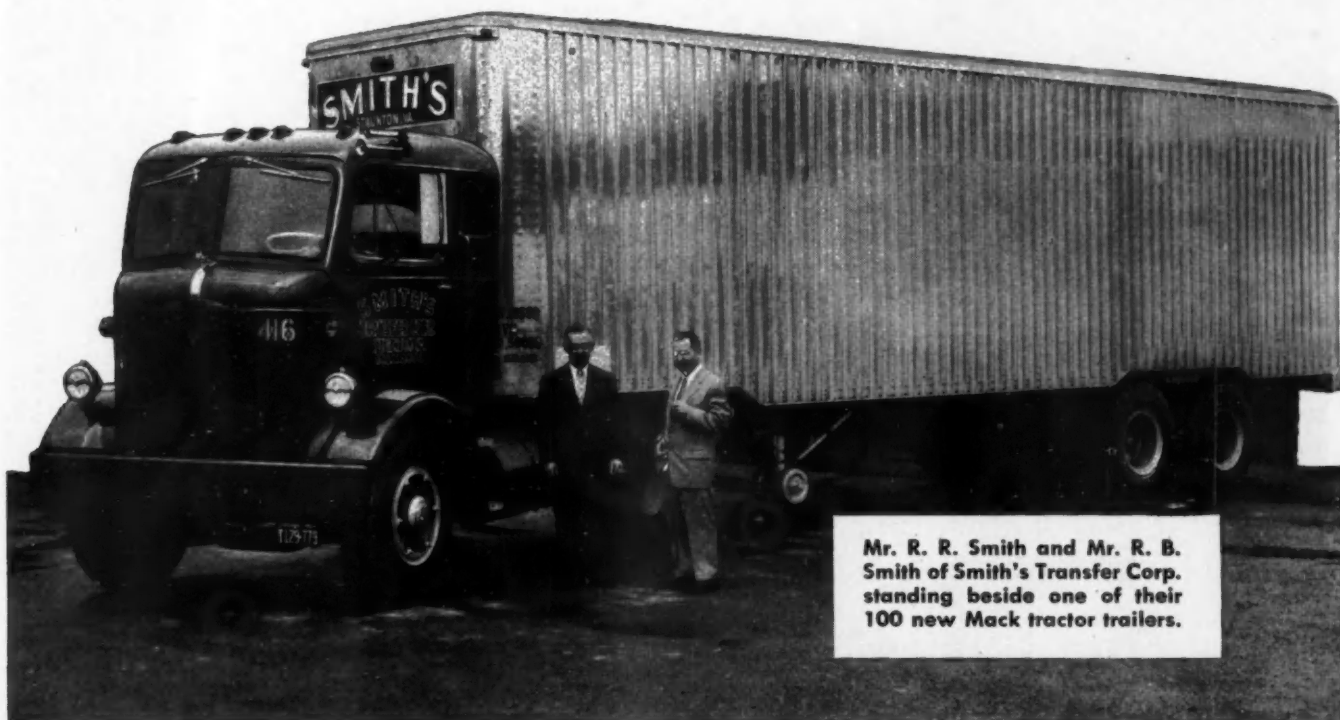
A Trailer for Atoms

Visitors to the International Conference on Peacetime Uses of Atomic Energy, held in Geneva August 8-20, were the first to see this mobile radiological laboratory. Engineered and built for the Atomic Energy Commission by the New York City branch of Trailmobile, Inc., it is believed to be the most valuable truck-trailer in the world. The trailer is to be used for demonstrating health and safety methods in the handling of radioactive materials. It is 35 ft long, sides are aluminum, windows are extruded aluminum and the trim is stainless steel.



SMITH'S TRANSFER SAYS MACKS...

with 100 light-weight Diesel Tractors



Mr. R. R. Smith and Mr. R. B. Smith of Smith's Transfer Corp. standing beside one of their 100 new Mack tractor trailers.

Ask Mr. R. R. Smith, president, or Mr. R. B. Smith, vice president of Smith's Transfer Corporation of Staunton, Virginia, what in their opinion is today's best truck investment, and you'll get the answer right away...an unqualified "Macks!"

This isn't just a hunch or an opinion. It's based on a detailed testing program, pitting Macks against the field, and the experience of other large operators running similar fleets.

After being thoroughly convinced that the matchless economy of the Mack Thermodyne® Diesel—plus Mack's rugged long life—makes it the leader of the industry, Smith's Transfer placed an order

for 100 Mack H63LT's as a start on a complete rehabilitation and replacement program. This firm operates as a leading Class I common carrier handling freight on regular schedules through New York, New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, and North Carolina, with terminals in Elizabeth, N. J., Baltimore, Md., Philadelphia, Pa., Charleston, W. Va., Harrisonburg and Winchester, Va., and Greensboro and Charlotte, N. C.

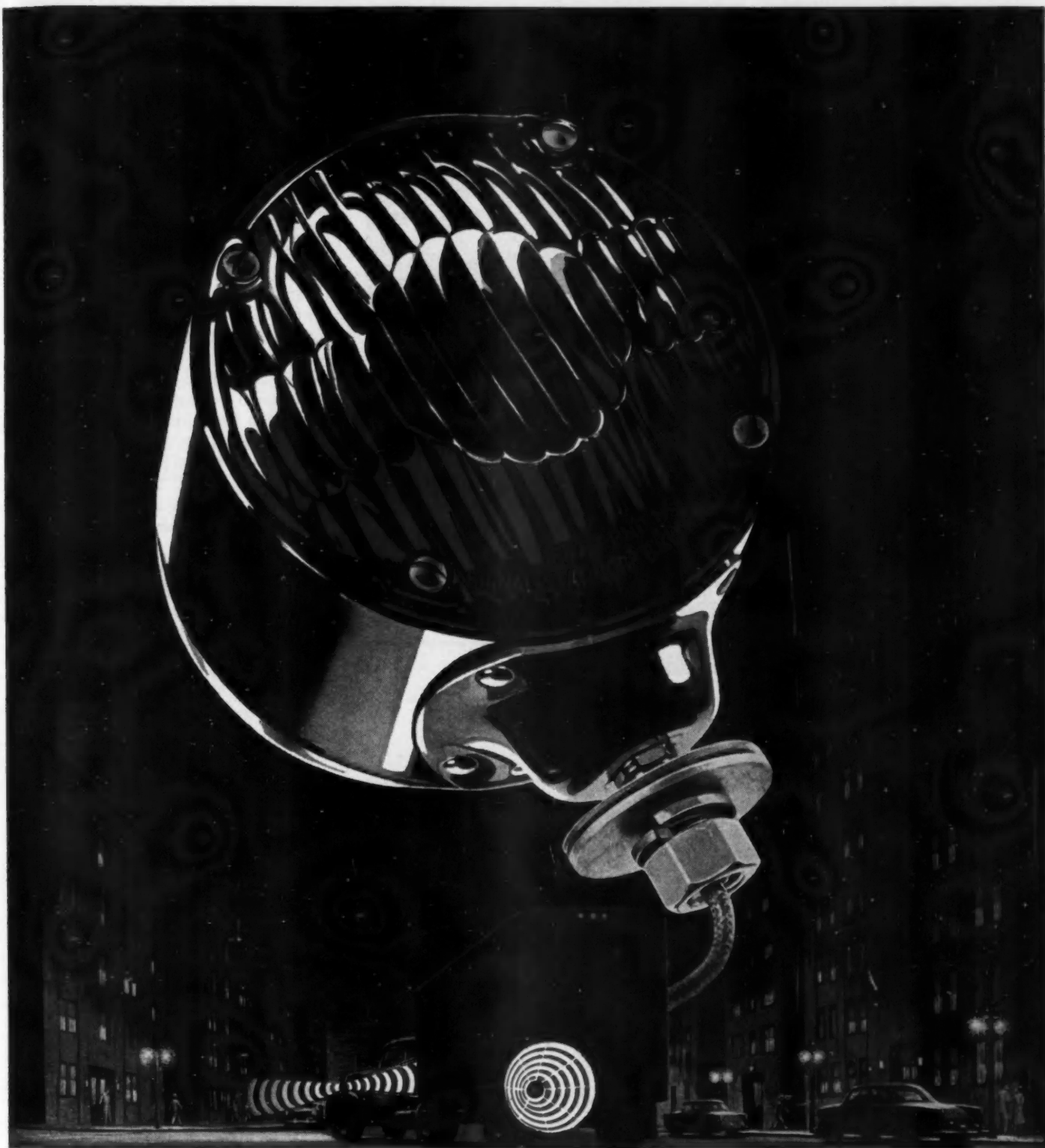
If you operate as this firm does, on tight schedules over both open highway and through congested city traffic, you'll find the earning power and staying power of Macks can't be equalled.

MACK TRUCKS Empire State Building, New York 1, N. Y.

1955 New Truck Registrations by Makes by States*

STATE AND MONTH	Brook- way	Chevro- let	Dia- mond T	Dodge	Ford	G.M.C.	Internat- ional	Mack	Reo	Stude- baker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama	June 762	1	118	526	205	134	30	4	9	17	8	8			1,822
June Mos.	3,317	12	990	2,949	821	832	83	13	50	102	32	40	21		8,862
Arizona	June 560	2	87	275	143	86	3	2	19	1	17	36	2		1,243
June Mos.	1,251	5	353	1,007	358	298	14	6	66	22	16	126	29		3,586
Arkansas	June 221		19	158	70	41	1	2	3	2	3	3	1		524
June Mos.	2,213	9	366	2,491	543	574	13	6	91	30	34	21	1		6,392
California	June 3,038	32	719	2,203	924	550	37	20	112	75	121	174	140		8,145
June Mos.	12,955	156	3,469	13,082	3,683	2,898	186	86	620	404	682	1,022	704		39,947
Colorado	June 442	4	70	277	145	90	11	6	18	8	38	69	6		1,184
June Mos.	1,776	13	435	1,688	496	580	63	25	86	46	240	373	94		5,915
Connecticut	June 303	14	58	188	67	101	48	8	13	17	17	17	11		863
June Mos.	1,106	42	307	974	265	496	125	23	48	110	52	101	61		3,721
Delaware	June 102	2	31	68	30	44	4	1	3	27	5	5			317
June Mos.	444	1	126	322	126	238	163	2	8	146	8	11	8		1,607
District of Columbia	June 58		16	58	11	16	1	3		4					167
June Mos.	2	304	1	96	345	170	119	5	16	1	12	3	15		1,106
Florida	June 1,009	4	152	705	235	163	65	13	41	69	37	55	16		2,564
June Mos.	4,107	29	850	4,445	989	1,055	249	61	206	274	183	330	114		12,892
Georgia	June 1,381	5	234	1,109	344	300	32	5	46	27	14	10	3		3,510
June Mos.	4,826	17	1,076	4,909	1,075	1,249	180	23	172	141	69	50	12		13,769
Idaho	June 238		42	166	93	59	1		17	4	18	37	5		682
June Mos.	869	6	243	638	346	415	21	4	85	24	89	206	22		3,170
Illinois	June 1,421	38	307	978	332	706	14	19	51	50	20	26	28		3,992
June Mos.	5,769	202	1,555	6,029	1,144	3,196	137	95	245	304	170	202	155		19,193
Indiana	June 838	1	131	569	192	358	9	7	44	37	10	21	13		2,230
June Mos.	4,267	48	896	4,075	853	2,188	86	48	388	284	67	117	87		13,404
Iowa	June 563	14	105	410	110	221	1		17	8	8	7	6		1,469
June Mos.	2,686	54	533	2,810	424	1,620	45	10	96	62	36	62	52		8,494
Kansas	June 761	1	78	497	182	161	1	4	17	6	10	13	22		1,753
June Mos.	3,314	14	415	2,634	672	1,062	2	22	106	64	36	95	29		8,665
Kentucky	June 436	2	83	346	157	88	4	2	11	11	6	9	4		1,159
June Mos.	2,667	13	427	2,322	685	736	56	10	95	76	85	79	23		7,274
Louisiana	June 760	6	86	603	196	117	12		20	24	9	6			1,639
June Mos.	3,743	21	565	3,749	746	976	40	5	163	92	69	42	4		10,215
Maine	June 196	1	28	124	73	47	30	1	8	6	15	18	9		586
June Mos.	899	2	161	768	260	310	91	2	54	36	73	116	22		2,795
Maryland	June 397	1	80	308	41	118	19	8	18	35	10	9	9		1,057
June Mos.	1,634	26	430	1,691	225	645	114	24	74	103	35	64	33		5,110
Massachusetts	June 351	3	122	416	107	199	30	9	10	29	11	32	31		1,353
June Mos.	1,788	52	489	2,415	375	895	180	40	62	192	74	179	127		6,889
Michigan	June 1,441	23	331	1,048	373	231	24	42	32	24	25	33	33		3,680
June Mos.	6,219	95	1,584	6,962	1,487	1,267	112	101	150	151	134	195	171		18,628
Minnesota	June 560	6	109	431	147	256	4		24	6	4	10	13		1,571
June Mos.	2,861	37	570	3,184	566	1,282	35	23	141	42	39	121	50		8,961
Mississippi	June 632		68	426	165	131	8		22	6	6	7	1		1,474
June Mos.	3,116	13	413	2,796	744	789	22		108	24	25	45	4		8,067
Missouri	June 1,020	13	137	701	268	291	6		9	32	11	12			2,506
June Mos.	4,577	96	727	4,198	1,006	1,615	41	17	100	159	86	79	37		12,798
Montana	June 270		43	153	82	80	4	1	11	7	18	54	1		724
June Mos.	875	1	246	901	302	480	23	5	86	30	97	275	26		3,327
Nebraska	June 385	4	66	223	80	154	7	2	15	2	7	13	12		950
June Mos.	1,786	65	377	1,842	398	1,039	20	17	78	61	83	111	134		5,981
Nevada	June 95		23	63	56	34	1		14	1	10	17	1		334
June Mos.	305	1	140	365	160	188	2	1	75	1	38	90	5		1,367
New Hampshire	June 97	1	37	76	35	40	10	4	13	1	6	16	3		340
June Mos.	5	441	3	139	445	104	41	11	35	8	47	81	15		1,494
New Jersey	June 693	14	219	823	238	237	63	6	16	47	14	21	40		2,252
June Mos.	96	2,990	70	1,014	3,225	998	1,153	278	30	105	323	74	157		10,689
New Mexico	June 319	1	64	170	89	72	7	1	10	4	19	18	3		777
June Mos.	1,219	12	261	986	320	302	42	4	53	13	63	92	14		3,381
New York	June 1,296	30	423	1,058	353	657	92	38	35	93	51	81	62		4,319
June Mos.	5,702	172	2,402	5,884	1,683	3,633	582	210	233	641	337	578	367		22,633
North Carolina	June 940	7	98	571	186	110	42	2	28	27	13	16	7		2,047
June Mos.	3,940	33	715	3,579	770	780	202	11	175	181	83	74	30		10,573
North Dakota	June 171		31	94	34	61	5		21	2	13	25	1		1,074
June Mos.	527	2	168	567	164	484	62		40	102	34	34	71		3,924
Ohio	June 1,389	18	340	1,036	336	444	269	89	215	466	194	250	263		20,352
June Mos.	6,166	69	1,569	6,558	1,226	2,856	183	1	21	12	6	7	4		1,814
Oklahoma	June 840	2	90	468	170	193	36	9	93	76	33	51	20		8,391
June Mos.	3,108	4	454	2,800	650	1,055	16	3	47	76	40	103	47		2,012
Oregon	June 638	10	117	452	246	217	68	19	147	187	162	449	154		7,254
June Mos.	1,962	49	479	2,078	698	802	131	14	42	103	5	72	42		4,279
Pennsylvania	June 1,390	18	393	1,037	376	639	492	113	281	477	32	491	139		20,073
June Mos.	5,552	87	1,830	5,594	1,182	3,302	40	14	20	32	9	16	17		2,047
Rhode Island	June 71	2	25	55	25	40	14	5	8	4	4	3	247		
June Mos.	398	24	97	445	64	205	39	5	20	32	9	16	17		1,373
South Carolina	June 395	1	76	285	88	71	6	1	7	11	1	1	2		945
June Mos.	1,628	7	342	1,573	319	357	49	1	48	64	16	16	3		4,422
South Dakota	June 104	1	38	89	28	30	1		5	1	4	7	308		
June Mos.	661	13	177	767	199	577	2	2	29	11	50	91			2,579
Tennessee	June 576	3	82	431	154	143	9	6	15	11	3	1,433			
June Mos.	2,742	17	642	2,843	773	879	121	17	93	113	37	36	4		8,317
Texas	June 4,487</														

* Data from R. L. Polk & Co.



SIGNAL OF SAFETY... SYMBOL OF QUALITY

A Signal-Stat on a truck fender is more than a signal of safety. It is a symbol of the quality-consciousness of vehicle manufacturers, dealers and operators who use it on their vehicles . . . visible proof that they will not compromise with quality or safety. Incidentally, Signal-Stats cost no more than ordinary directional signals.

More trucks use Signal-Stat Class A—Type 1 directional signals than all other makes combined.

Signal-Stat

DIRECTIONAL SIGNALS
SWITCHES
FLASHERS

SIGNAL-STAT CORPORATION, SIGNAL-STAT BUILDING, 523-539 KENT AVENUE, BROOKLYN, N.Y.

COMMERCIAL CAR JOURNAL, September, 1955

105



General Motors Stages a "Powerama" in Chicago

A GREAT array of GMC diesel trucks and coaches tells GMC Truck and Coach Division's diesel power story at the General Motors Powerama in Chicago.

Offering a kaleidoscopic array of attractions ranging from earthmovers to elephants, diesels to dancing girls—and dancing tractors!—the giant "world's fair of power" is open to the public through Sept. 25, in a glamorously decorated site next to Soldier's Field on South Lake Shore Drive. Admission is free. Hours are 10 am to 11 pm daily except Sundays, when they are 12 noon to 11 pm.

Exhibits of special interest to fleetmen will range from the famous Greyhound Scenicruiser to GMC's sensational "dream truck," L'Universelle. Included are a heavy-duty diesel truck powering an oil well servicing unit, a logging truck-trailer combination loaded with huge logs, road-building vehicles, and seven of the latest types of coaches.

One exhibit, a sanitation truck that was among 75 similar trucks recently ordered by the city of Chicago, will dramatize the fact that diesel-powered equipment is constantly invading new fields.

Diesel Buses

Besides the Scenicruiser, the coach display will include the General Motors turbine-powered Turbocruiser, a deluxe Golden Chariot intercity coach, a 41-passenger intercity coach, and three transit buses.

All seven of the coaches will ring the GMC theme center, which includes such exhibits as mechanical cut-aways, a back-projected color motion picture on diesel truck application, huge color transparencies, and other educational displays.

The Big Diesels

Another highlight of the GMC display will be the oil well servicing rig. Mounted on a GMC model DW976-67 truck powered by a 230-horsepower diesel engine, the rig actually will pull oil well pipe and perform other oil-field operations right on the show grounds.

The logging tractor, a GMC model DW975-67, will have its semi-trailer loaded with 32-foot-long Douglas fir logs imported from the Pacific Northwest for the show. It will be displayed

(TURN TO PAGE 108, PLEASE)

The NEW HUNTER LP-Gas Cargo Heater

Light Weight
Compact
Easy to
Install

Provides Greater Heating Capacity

The Hunter LP-Gas Cargo Heater with an exclusive new jet type burner moves a constant flow of clean heated air to every corner of even the largest trailer, providing safe, sure protection for perishable cargo.

- Operates for 24 hours at top heat — at very low cost.
- Completely independent automatic operation.
- Accurate thermostatic control — no "hot spots" — no "cold spots."
- No moving parts — no maintenance problems.
- Safety pilot — meets all ICC safety regulations.
- Compact — takes up less cargo space — cargo can be placed within 4 inches of heater.
- Operates in coldest weather — on or off the road.

Completely self-contained portable units also available.



HUNTER

MANUFACTURING CO. 1550 East 17th St., Cleveland 14, Ohio



More DURABLE than
any other battery separator...



no wonder the best batteries use

U. S. Peerless MICROPOROUS Rubber Separators!



Write to address below for free copy of informative booklet on the high-performance, low-upkeep U.S. Peerless Rubber Battery Separators.

Battery acid and plate material have a highly corrosive effect on ordinary separators, especially at high temperatures. Charring, pinholing, pitting and disintegration are common results. *But not* with U. S. Peerless Microporous Rubber Separators. These durable, money-saving battery protectors have greater resistance to oxidation than any other known separators. Laboratory and road tests proved this beyond the slightest doubt.

U. S. Peerless Separators are so durable that the plates can never break through them. They will not

get mushy or soft during battery life—will maintain original toughness. They cannot be harmed by battery acid, overcharging, or heat. They deliver 20% faster cranking speed because of high porosity. In cold weather, they deliver 10% more power when needed most. Cost per month is far less for Peerless-insulated batteries than for batteries with ordinary separators. For more mileage per battery dollar, order batteries equipped with United States Rubber Company's Peerless Microporous Rubber Separators.

UNITED STATES RUBBER COMPANY

Electrical Wire and Cable Department • Rockefeller Center, New York 20, N. Y.



GM's Powerama

Continued from Page 106

in conjunction with the operating sawmill exhibit.

Several 600 series diesel-powered GMCs will be used in road building and cotton gin displays. One will transport raw and baled cotton to and from the cotton gin.

Seven GMCs also will take part in the Powerama stage spectacle, "More Power to You."

GM divisions with exhibits at the Powerama will include Allison, Cleveland Diesel, Detroit Diesel, Diesel Equipment, Electro-Motive, Euclid, Fabricast, Frigidaire, and GMC Truck & Coach.

Stage Show

There is, for example, the "world's first technological circus," an unique stage show presented four times daily in an outdoor theater seating 7000 persons. Produced and directed by Richard and Edith Barstow of Broadway and Hollywood fame, the

stage entertainment features tractors that do the mambo, strength "contests" between elephants and earth-movers, special music, scores of dancers, a women's style show, trained horses, and other attractions.

Introduced to the public at the Powerama is a revolutionary lightweight train, designed and built by General Motors at the request of a committee of railroad presidents. It can carry 400 passengers in "air ride" comfort, reaching speeds of over 100 miles an hour for sustained stretches.

Also featured at the Powerama will be GM's XP-21 Firebird, first gas turbine automobile built and tested in the United States, plus seven experimental "dream cars."

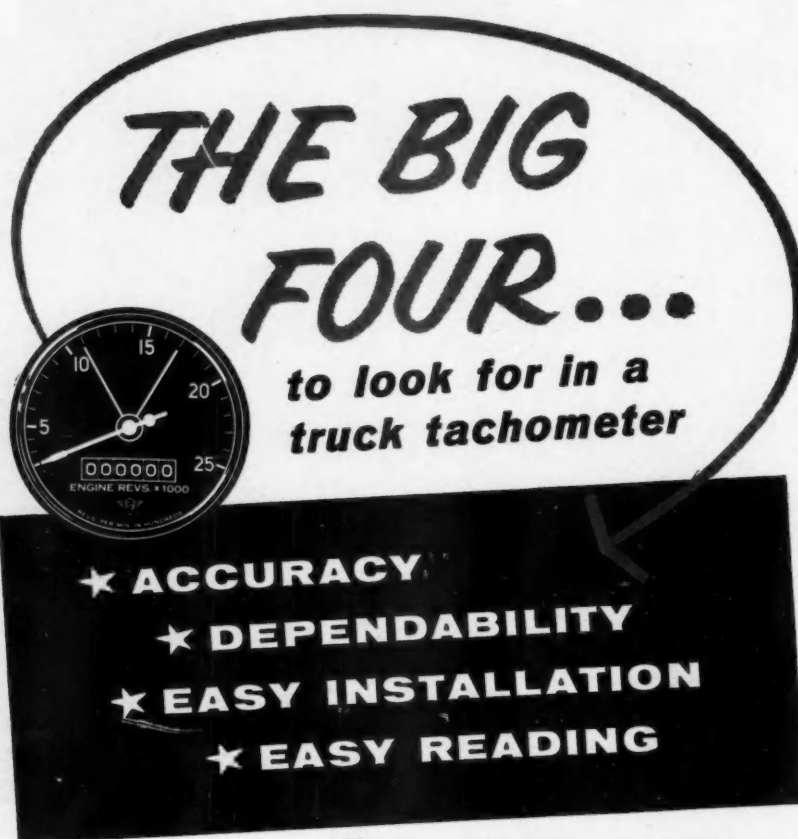
At a specially-constructed dock in a lagoon is a marine exhibit including a 65-foot Florida shrimp boat, a yacht, the largest tug on the Great Lakes—and a Navy submarine of World War II fame, the U.S.S. Tautog. Visitors are permitted to board many of the craft.

Besides the submarine, an imposing array of defense exhibits includes tanks and other armored vehicles which are put through their paces; an F-89 "Scorpion" fighter plane; scale models of vertical takeoff aircraft; Navy and Air Force guided missiles; and military aircraft engines.

Atomic Cannon

Another defense feature is the Army's atomic cannon. This 85-ton weapon can fire an atomic shell accurately more than 20 miles.

An M-48 tank with the control apparatus outside where spectators can watch an operator control the steel monster is also on exhibit.



All yours with Stewart-Warner ELECTRIC TACHOMETERS!

1. Accuracy. Positive electric drive assures accurate speed indication, with minimum over-run, at any speed, any temperature, and regardless of voltage variations in battery current.

2. Dependability. Designed and engineered for long, hard usage. Manufactured to highest standards of quality. No flexible shafts—no oscillators. Vibration proof.

3. Easy Installation. Easily installed without special tools and changes in vehicle's electrical system. Will not affect engine spark or timing at any speed.

4. Easy Reading. Large 3" diameter, illuminated face dial with full 270° pointer travel. Vibration-proof pointer assures quick, easy readings. Adjustable red markers remind driver to keep engine speeds within most efficient, economical range.

Exclusive Feature! Stewart-Warner's is the only electric tachometer with an odometer. (Records total engine revolutions.) Makes it possible to schedule maintenance and overhaul periods on the basis of engine use. Also gives an accurate measure of engine life.

• See your Jobber or write:

STEWART-WARNER

Instrument Division

Dept. DD-95 • 1840 Diversey Parkway • Chicago 14, Illinois



Pedrick

FORMFLEX RING JOBS

Restore Engine Efficiency

... make many overhauls unnecessary!

Fleet owners everywhere are finding that they can frequently avoid doing costly overhauls by using Pedrick Formflex Chrome Ring Sets.

Only Pedrick Formflex has the patented "Equalizer"—and only the "Equalizer" provides the soft but positive, uniform pressure *all around the cylinder wall* that assures absolute ring conformability.

In fact, Pedrick Formflex Chrome Sets are guaranteed to provide a far better seal than con-

ventional rings—guaranteed to outperform and outlast *any* other ring in *any* engine. You'll find they lower your costs because they provide trouble-free operation and substantial savings in fuel and oil. Their extremely long life extends the periods between re-ring jobs or overhauls . . . keeps down time to a minimum.

Use a Pedrick Formflex Chrome Piston Ring Set on your next tough job and see how completely satisfied you are.

A "New Engine"
In Every Box!



PEDRICK Precisionered CHROME TOP RINGS

Specially designed for heavy-duty application, the non-porous CHROME top rings resist heat, eliminate the danger of scuffing and last up to 4 times longer. Heat-Shaping assures correct and lasting tension and uniform pressure. Made from a centrifugally-cast special alloy, *they just won't break—even in the most severe service.*



INSIST ON

Pedrick

FOR THE RIGHT RING JOB

WILKENING MANUFACTURING CO. • PHILADELPHIA 42

Public Service . . . Tops in Shops

Continued from Page 70

repair area, where vehicles are brought in after being washed. Here the bridge crane on a long rail overhead permits easy handling of engines and component parts when being moved to the vapor degreaser and to the ma-

chine shop at the other end of the area.

The stock room and mechanics' facilities are located centrally so that a minimum of time is required in getting parts and supplies. The body shop is located

at the far end of the shop in a move to eliminate noise and dirt. Washing and painting are adjacent and tie in nicely with the normal flow of the work.

A drain trench extending practically the full length of the shop and at each side makes for easy washing down of the entire floor. Service facilities for fuel, oil, water are located at the front where vehicles pass as they are dispatched to the field. Parking facilities for vehicles needing service and/or repairs are located in the center section of the shop, and the helicopter parking area is just behind it. Two double doors at each end of the shop permit easy exit and entrance and eliminate turnarounds inside the shop when it is crowded. Passenger cars and light trucks are parked along the opposite side of the shop.

Oils and greases are stored in a fire-proof room at the opposite corner. Next to this is the dynamometer area, where vehicles are "road proofed" before going to the field. While this section is not partitioned off, we feel that its location obviates this since the working areas are all at the other side of the building.

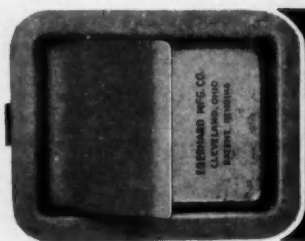
But pictures speak louder than words, and those on these pages help illustrate why those who have seen it tell us ours is "tops in shops!"

END

Please Resume Reading Page 71



"And here, Miss Belvidere, is your Queen - of - the - Plumbers' - Convention costume!"



16

EBERHARD


Paddle Handle

Door Locks

Provide Easy
Access to 12
Compartments

Pat. No. 2,642,300

No. 4879



Body by Modern Vehicle Co., San Francisco, Calif.

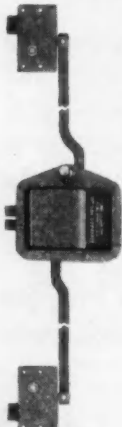
A total of nine Eberhard Paddle Handle Recessed Door Locks are now available.

Smooth in appearance and operation. Made in 1, 2 & 3 point, end-latching or side latching models, with or without the key locking feature.

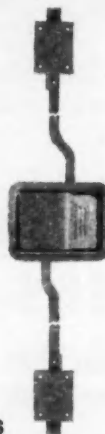
Operated by lifting paddle handle. Present a neat "flush with the body or door" appearance.

Installed with screws, bolts or by spot welding.

Two of the nine models are shown here. Write for literature.



No. 4885
Three Point
Key Locking
Right and Left Hand
(Illustration shows
right hand)



No. 4886
Two Point
(Non-Key Locking)

EBERHARD

TRUCK BODY FITTINGS

EBERHARD MANUFACTURING CO.

Division of the Eastern Malleable Iron Co. EVARTS AVENUE CLEVELAND, OHIO



HASTINGS *Beveled 2-C* OIL RING

SEATS 3 TO 4 TIMES FASTER THAN OTHER CHROME RINGS!

BEVELED CHROME RAILS

make fineline contact with cylinder wall for a faster seat. Less area to wear-in means less time to break-in.



See the Difference!



BEVELED CHROME RAIL—the new fast-seating "fineline" design.



CONVENTIONAL CHROME RAIL—originated by Hastings...now replaced by *Beveled Chrome*.

ANOTHER HASTINGS FIRST—PATENT NOS. 2511874, 2565042. Other Patents Applied For

Only Hastings gives you a chrome oil ring with patented, *beveled* rails—a chrome ring set that seats 3 to 4 times faster than conventional chrome!

These exclusive beveled rails make positive, fineline contact with any cylinder wall—tapered, out-of-round or re-bored. Oil control starts right now. And because Hastings is a *soft pressure* oil ring, you know it is gentle.

Beveled chrome oil rings are included in the Hastings 2-C Chrome Sets your jobber now has. With Hastings torsional designed, high-graphitic compression ring in the same "Motor Engineered" set, you get the fastest seating, best performing chrome combination there is!

Next ring job, install the *only* chrome rings that are beveled to seat fast, and stop oil-pumping from the start. Install Hastings 2-C Chrome Set—made by replacement specialists!

TOUGH but oh so gentle



HASTINGS MANUFACTURING COMPANY, HASTINGS, MICHIGAN • HASTINGS LTD., TORONTO
Piston Rings, Casite, Oil Filters, Spark Plugs, Wear Reducer

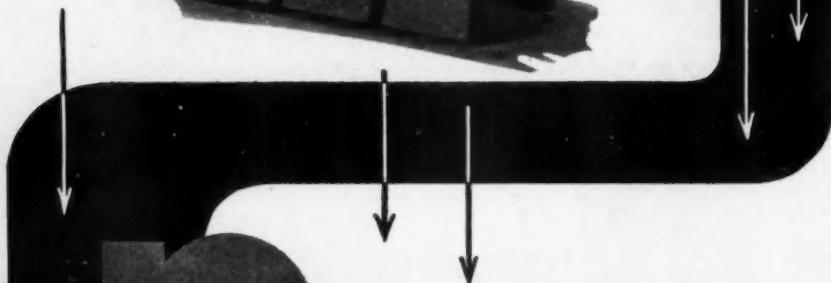
HASTINGS

STEEL-VENT PISTON RINGS

Chrome Faced for Heavy-Duty Service

Tough on oil-pumping . . . Gentle on cylinder walls

COMPRESSOR PLUS VALUES



Performance

has established Ingersoll-Rand Type 30 Compressors over the years . . . famous for highest efficiency.

Dependability

is certainly one of the factors you demand most in a compressor—and you can rely on Ingersoll-Rand! Air is *there* when you need it, so your production flow never lags.

Quality

is evident in every I-R Type 30 Compressor—from the 1/2 hp through the 20 hp size with pressures to 250 psi—trouble-free operation—top economy! Get catalog 1500-C for more detailed information.

3-246

Ingersoll-Rand

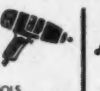
11 Broadway, New York 4, N.Y.



AIR COMPRESSORS



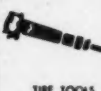
AIR IMPACT TOOLS ELECTRIC



IMPACT CUTTERS



TIRE TOOLS



AIR STARTING MOTORS

Originators of Impacttools

AIR & ELECTRIC

Legislative Roundup

Continued from Page 83

pealed the 3 per cent gross receipts tax, reduced the bus inspection fee, and authorized pro rata registration of interstate bus fleets.

Minnesota and North Dakota increased fees for all classes of vehicles by approximately 5 per cent.

Vermont provided a fee of \$1.15 per hundred weight for trucks that exceed 40,000 lb gross weight.

Other Tax Changes

Other changes of an important nature briefly are as follows: Arizona increased its basic registration fee from \$3.50 to \$4.00. New Jersey provided new flat annual fees for passenger cars (instead of horsepower). South Dakota provided a system of truck-tractor registration by which interchangeability of trailers is facilitated. Texas reduced motor bus fees. Minnesota reduced fees for intercity buses. Utah changed its basis for computing commercial vehicle fees from an unladen to a gross weight basis.

Mileage tax bills were introduced in the following nineteen states: Arkansas, Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Iowa, Michigan, Montana, Nebraska, North Dakota, Oklahoma, Pennsylvania, Tennessee, Texas, West Virginia, Wisconsin, and Wyoming. The Colorado bills were to change the existing mileage tax, and, with the exception of Idaho, such tax proposals have been defeated in all the states except Pennsylvania and Wisconsin, where the legislatures are in recess.

Reciprocity

Laws newly enacted in California, Montana, Oregon, and Washington, provide for creation of new reciprocity boards and adopt new reciprocity provisions and requirements. Similar legislation failed of enactment in Missouri.

Thirteen states considered bills

providing
cation of
tions amo
such vehi
ten states
islation:
braska,
North Da
only), Te
ington. C
for pro-ra
erated ba
tions and
and fees.
erty carri
senger ca
law, howe
senger ca

Repeal

Kansas a
pected to
lations be
others. A
souri offic
tiate a re
other hand
age tax i
have an
be the cas
providing
at least
checking s

Anti-Diver

Twenty-
chosen the
ment meth
highway u
most recent
is Wyoming
— Montan
adopted re
sion amen
proposed a
on in 1956

Proposed
troduced i
Arkansas,
Illinois, M
New Mexic
Island. Th
been killed
Delaware a

Uniform L

At least
ed their tr
more closel
Road" Chap
hicle Code.

(TURN TO

providing for proportionate allocation of fleet vehicle registrations among states through which such vehicles operate. Thus far, ten states have enacted such legislation: California, Kansas, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma (buses only), Tennessee, Utah, and Washington. Generally, they provide for pro-rating (on a mileage operated basis) of vehicle registrations and certain specified taxes and fees. They apply to all property-carriers and to for-hire passenger carriers. The Tennessee law, however, is restricted to passenger carriers only.

Repeal of ton-mile taxes by Kansas and New Mexico is expected to improve reciprocal relations between these states and others. Already Kansas, and Missouri officials are meeting to negotiate a reciprocity pact. On the other hand, reenactment of a mileage tax in Idaho is expected to have an adverse effect, as may be the case with a Colorado law providing for 10 permanent and at least 4 mobile port-of-entry checking stations.

Anti-Diversion

Twenty-five states already have chosen the constitutional amendment method for protecting their highway user tax proceeds; the most recent addition to this group is Wyoming. This year two states — Montana and Tennessee — adopted resolutions for anti-diversion amendments. The Montana proposed amendment will be voted on in 1956 and Tennessee in 1958.

Proposed amendments were introduced in the legislatures of Arkansas, Connecticut, Delaware, Illinois, Maryland, New Jersey, New Mexico, New York and Rhode Island. These proposals have all been killed or died, except in Delaware and New Jersey.

Uniform Laws

At least ten states have amended their traffic laws to conform more closely to the "Rules of the Road" Chapter of the Uniform Vehicle Code. They include Connec-

(TURN TO NEXT PAGE, PLEASE)



AIR IMPACTOOL saves 35%

on Truck Spring Repair Job!

Why use slow, costly hand methods of replacing broken truck springs? An I-R Air Impactool can save you time and money... get your trucks back on the highway sooner. Keeps your mechanics happier, too. The Size 518 Impactool shown cut truck spring repair time by 36 minutes — a saving of \$2.10.



JOB NO.:
Truck Spring Repair
(22 nuts)
TIME:
Hand 1.7 hrs.
Impactool 1.1 hrs.
Savings .6 hr.
@ 3.50 per hr.
\$.60
\$2.10 Saved

Size 518 Impactool tightening U-bolts on large truck.

Try one of I-R's line of light, powerful, rugged Air Impactools today. Call your I-R jobber for a demonstration at no obligation.

Ingersoll-Rand

11 Broadway, New York 4, N. Y.



Originators of Impactools AIR & ELECTRIC

18A-193

Legislative Roundup

Continued from Page 115

ticut, Indiana, Montana, Nevada, New Mexico, North Carolina, North Dakota, Tennessee, Utah, and Wyoming.

The Montana law conforms almost verbatim to the Rules of the Road and equipment provisions of the Uniform Code including the 1954 revisions.

The new North Dakota law contains the Uniform Code form of Rules of the Road except those relating to speed, reckless driving, driving under the influence of liquor, and negligent homicide.

The Wyoming law incorporates several chapters of the Code and contains the entire Chapter on Rules of the Road except for speed limits.

The Tennessee law includes the Rules of the Road and accident

reporting provisions almost verbatim. Tennessee, also, passed a law to authorize cities and towns to adopt the Model Traffic Ordinance by reference.

Nevada passed the right-of-way provisions for entering a through highway or stop intersection, and the provisions for entering a highway from a private road or driveway.

The New Mexico law brings limitations on driving to the left of the center of the roadway closer to conformity with the Uniform Code.

The Connecticut law conforms more closely to the Uniform Code, relative to driving on the right side of the road, right-of-way, overtaking and passing, and pedestrians' control signals.

North Carolina brought right-of-way provisions into conformity with the Code and made other minor changes in provisions for overtaking and passing.

Vehicle Equipment

Changes in the various states affecting safety equipment required and permitted on trucks and buses have been summarized in the chart appearing on pages 82 and 83.

All the states except Alabama have now adopted the new headlamp provisions to permit use of new sealed-beam headlamps.

However, the Code's periodic inspection provisions, although

(TURN TO PAGE 119, PLEASE)

Trucking Along . .

The Chinese of 300 AD had regular fleets of trucking wagons which operated in a rather curious fashion. They were used for the purpose of transporting hay, but even though a cargo was designed for a really long run, no trucker would take it further than his nearest neighboring city. There it was unloaded and another truck owner would put the hay on his vehicles and cart it one town nearer its final goal. This hauling method was utilized because there was such a great difference in languages between communities, even when they were relatively close to each other.



UNDER AND OVER INFLATION WRECK ONE TIRE OUT OF EVERY 6

Improper inflation of tires can rob you — because it shortens tire life, wastes useful mileage, raises fleet cost-per-mile unnecessarily. Unnecessarily — because ECO tireflators give you constant, accurate delivery of desired pressures to insure all-around proper tire inflation at any pressure from 5 to 110 pounds. Economically, too, because in most cases, first cost of an ECO tireflator is its last cost. Ask your John Wood Representative for details about ECO remote tireflators and ECO islanders for tire-saving control of inflation pressures.



MODEL 97 ECO tireflator for mounting on wall, pillar or post. Fits anywhere to save your time and money.



JOHN WOOD COMPANY

BENNETT PUMP DIVISION Muskegon, Michigan
In Canada: Toronto • Montreal • Winnipeg • Vancouver

Legislative

considered have been in condition, New Dec. 1, 19 gram which to take effect.

State law form more Vehicle Code ment in Id North Car Utah, Was

Washington adopted in most verba Vehicle Code ment.

Idaho an Code equip cally with

North C increasing article on ing equip discolored ing the Co turn signal size of veh kota broug lights, fla devices equipment the Code, equipment ly incorpor brakes, h and reflect

California



"Safety is thing as dr

COMMERCIAL

Legislative Roundup

Continued from Page 116

considered in 20 states this year, have been enacted in none. In addition, New York postponed until Dec. 1, 1956, its inspection program which had been scheduled to take effect Sept. 1, 1955.

State laws were amended to conform more closely to the Uniform Vehicle Code Chapter on equipment in Idaho, Indiana, Montana, North Carolina, North Dakota, Utah, Washington, and Wyoming.

Washington and Wyoming adopted in virtual entirety and almost verbatim the entire Uniform Vehicle Code Chapter on equipment.

Idaho and Indiana adopted the Code equipment revisions practically without exception.

North Carolina enacted a law increasing conformity to the UVC article on lamps and other lighting equipment, also prohibiting discolored safety glass and enacting the Code provision requiring turn signal devices on the basis of size of vehicle or load. North Dakota brought provisions on headlights, flares and other warning devices and air conditioning equipment into closer accord with the Code, and Utah amended equipment requirements to largely incorporate UVC provisions on brakes, headlights, other lights, and reflectors.

California has passed a law to

fix standards for safety belts and Illinois has enacted a measure requiring all new vehicles to be designed to be equipped by the owner with hooks for the attachment of safety belts.

Michigan has passed a law to require windshield washers on all new vehicles.

The following six states have passed laws to require mud flaps on trucks and trailers: Maine, Nebraska, New Hampshire, Rhode

Island, Tennessee, and Utah.

An additional nine states have passed laws to require turn signals on vehicles of specified dimensions—usually when the body, cab, or load extends 24 in. to the left of the center of the steering post or 14 ft to the rear. They are Idaho, Illinois, Indiana, Montana, North Carolina, Oregon, Tennessee, Utah, and Wyoming.

END

Please Resume Reading Page 84

COLD-WEATHER Tune-Ups Save Money!

**Start Now — with NIEHOFF
says Danny Dollar...**

• Save money by guarding now against roadside repairs, towing charges, and vehicles out of service this winter. Niehoff Warranted Ignition Parts provide one of the surest ways of keeping your fleet operating efficiently, economically—and profitably!

Quick, easy installation saves time costs, speeds job completions. Niehoff Warranted Ignition Parts are precision-made to fit all popular makes and models of cars and trucks. What's more, each part is warranted for 90 days or 4,000 miles of use as a pledge of Niehoff dependability.

So order Niehoff Warranted Ignition Parts now...keep your fleet going this winter!



C. E. NIEHOFF & CO.

4925 LAWRENCE AVENUE, CHICAGO 30, ILLINOIS

WAREHOUSES: NEW YORK 19, N.Y., 250 W. 54th Street. PHILADELPHIA, PA., 1631 Fairmont Ave. BOSTON 34, MASS., 254 Brighton Ave. BRANCHES: LOS ANGELES 15, CALIF., 1330 W. Olympic Blvd.



"Safety is Safety, but there is such a thing as driving too slow, you know!"

COMMERCIAL CAR JOURNAL, September, 1955

They're Gonna "Railroad" the IC Act

Continued from Page 75

could apply to the ICC for approval as a contract or common carrier, depending on his operation.

In the Cabinet Committee Report, it was proposed that private carriage be limited to transportation of property of which the carrier was the owner. Private carrier

groups opposed this as upsetting the "primary business" test of private carriage as established by the Supreme Court in the Brooks Transportation Co. decision. They further pointed out a private carrier is not always the owner of the goods he transports (i.e.: laun-

dries). However, when the proposed legislation putting the Report into effect was drafted, the definition was broadened to include "lessee" or "bailee" as well as "owner."

Contract Carrier Rates

The proposed legislation requires motor contract carriers to "... file with the Commission, publish, and keep open for public inspection, in the form and manner prescribed by the Commission, schedules containing the rates or charges of such carrier *actually maintained or charged...*"

At present, contract motor carriers are required to file only their minimum charges, and the ICC has the authority to waive this requirement. In the new legislation, these provisions have been entirely eliminated.

The new legislation would, however, permit the contract carrier to file with the Commission his actual contracts in lieu of a schedule of rates and charges.

Under the proposed legislation, when a contract motor carrier's rate contravenes *any part of the entire IC Act*, the ICC may prescribe a new minimum charge. In doing so, the Commission's ruling must give no advantage or preference to the contract carrier in competition with *any common carrier, subject to the entire IC Act*—rail, motor, water or freight forwarder—that is inconsistent with the public interest or the National Transportation Policy.

Further, the ICC is no longer required to consider the effect of the prescribed rate on the movement of traffic by contract carriers. The proposed revision does retain the requirement that the ICC consider the cost of the services rendered by such contract carrier.

Freight Forwarders

The Cabinet Committee Report recommends amending Part IV, Section 402 (c) of the IC Act to "Provide definite statutory standards for determining which shippers or shipper associations involved in consolidation or distribution of volume freight on a non-profit basis for securing lower rates are entitled to exempt status."

While this recommendation was (TURN TO PAGE 122, PLEASE)



...WITHOUT A THERMOSTAT TEST

Don't risk your shop's reputation to defective thermostats. It's best to replace with DOLE DV ... the modern thermostat for new and old cars and trucks. Saves gas and oil

... reduces engine wear ... gives a sweet-running motor. Gets more heat out of heaters.

There's a nice profit for you in every DOLE Thermostat you install. Order them from your Wholesaler today.

**Now Standard Equipment
on 13 Leading
Cars and Trucks**



S
CO
TES

-for



MT-26 COMP
adaptor, \$9.7
adaptor and sp





*** Snap-on COMPRESSION TESTER MT-26**

- for faster, easier testing of late model engines

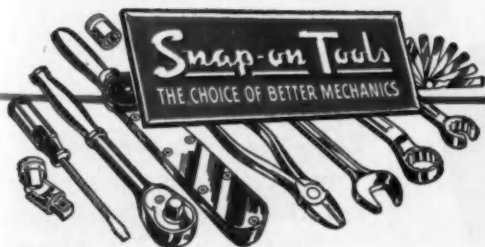


MT-26 COMPRESSION GAUGE SET with standard 14 mm adaptor, \$9.75. Set complete including 18 mm Ford adaptor and special 14 mm Chevrolet adaptor, \$12.85.

COMPRESSION TESTING of the most advanced V-8's—even where plugs have tightest clearances near fender wells, manifolds and accessories—is a cinch with this compression gauge set. The 16-inch flexible hose gives you access to the widest range of spark plug installations. A complete set of 3 adaptors (standard 14 mm, special Chevrolet 14 mm and Ford 18 mm) covers most engines.

Adaptor inserts in spark plug hole with same socket that removes plugs. Hose coupler snaps into place on adaptor, and you're ready to test. Gauge holds reading until you release coupling to test next cylinder. Calibration is in 5-pound divisions to 250 P.S.I.

Let your *Snap-on* Man demonstrate how much faster and easier this set handles compression testing on modern engines. The complete *Snap-on* catalog of more than 4,000 quality tools is free. Ask your *Snap-on* Man or write the factory.



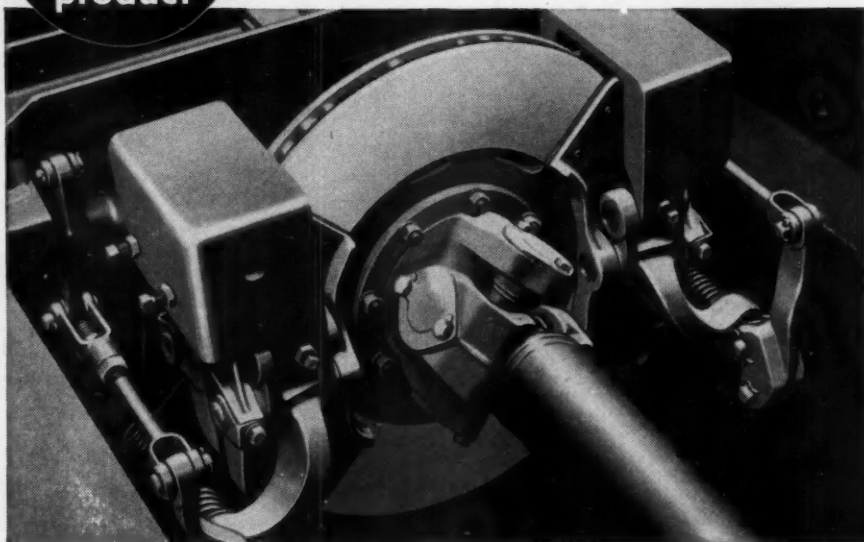
SNAP-ON TOOLS CORPORATION

8026-I 28th Avenue • Kenosha, Wisconsin

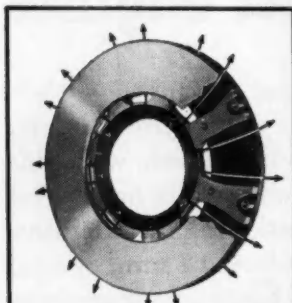
* Snap-on is the trademark of Snap-on Tools Corporation



It Pays to Specify TRU-STOP Brakes



**because they give you
Real Emergency Braking...Smooth,
Positive Stops...Safe Parking...
and Lower Service Costs**



Longer Lining Life

• The terrific heat generated in braking cuts lining life. TRU-STOPS quickly dissipate this heat. Most of the disc is exposed to the air even during braking. And a cooling jet of air circulates through the disc, prolongs lining life.

Real Emergency Braking. TRU-STOPS are real emergency brakes—not just “parking brakes.” They serve as auxiliary brakes on long down-grades and can bring the vehicle to a smooth, quick stop if service brakes suddenly fail.

In fact, TRU-STOPS can do this and more. They can handle the vehicle with safety so it can be removed from the road.

Smooth, Positive Stops. Pressure is in direct proportion to the pull on the brake lever. There is no dangerous self-energizing or “over-braking.”

Safe Parking. TRU-STOPS hold on grades—prevent “parking brake” accidents.

Lower Service Requirements. TRU-STOPS are mounted directly on the drive shaft. Their simplicity of design and accessibility reduce maintenance requirements. Relining or adjustment is a simple job for any mechanic with ordinary tools. It is not necessary to drop drive shaft.

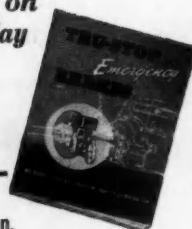
Specify TRU-STOPS for factory installation on your next vehicle.

*This Booklet gives the complete story on
TRU-STOP Brakes. Send for your copy today*



**Automotive and Aircraft Division
AMERICAN CHAIN & CABLE**

601 Stephenson Bldg., Detroit 2
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.



“Railroad” the IC Act?

Continued from Page 120

not incorporated into the presently proposed legislation, it could come up during the hearings on the Report.

ICC Intrastate Authority

One recommendation contained in the Report and incorporated in the proposed legislation could result in increased business for both bus and truck fleets. The ICC's control over purely *intrastate* rates and charges would be broadened to include rail service requirements.

Upon a finding that the state-imposed service requirements cause a “net loss in revenue” or a burden on interstate commerce, the ICC would have the power to prescribe whether or not the service would be continued. The Commission, however, could not issue an order requiring discontinuance or curtailment of service unless other reasonably adequate transportation service was available to the public, “including private carriage.”

The Cabinet Committee Report touches on the exemption from regulation of trucks carrying certain agricultural products from farm to market. Says the report, “These exemptions have grown under current court rulings so that now, for example, the ICC has before it a case involving the question of whether green coffee beans and cocoa beans are ‘exempt’ commodities, although neither is produced by any farmer in this country. A continual expansion of these exemptions could destroy the fundamental purpose of the Act.”

No proposals affecting exempt commodities have been included in the suggested legislation, nor does the Report make any formal recommendation suggesting any specific change. The Report does say, “The Act should be clarified to indicate what exemptions the Congress now wishes to give without undue interference with the main purpose of the legislation.”

Complete Rate Overhaul

The Cabinet Committee Report and the proposed amendments to

(TURN TO PAGE 124, PLEASE)

KRAFT®

— SYSTEM —

RECAPPING

A GENERAL TIRE SERVICE



PROVED OVER MILLIONS OF MONEY-SAVING MILES!

- ✓ Extra-long mileage, top-quality materials
- ✓ Factory-approved equipment
- ✓ Factory-trained recappers
- ✓ Guaranteed service Coast-to-Coast

No matter what size fleet you command, KRAFT System Recapping can add unlimited low-cost miles to your tires . . . add extra profits to your pockets. Discover today just how a business-like, coast-to-coast program like the Kraft System can save money . . . make money for you. Call your General Tire Distributor—Headquarters for every Truck Tire Service.

**KRAFT—THE ONE NATIONAL RECAPPING SYSTEM
DESIGNED BY TRUCK TIRE MEN FOR TRUCKMEN**



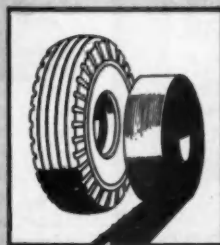
CERTIFIED INSPECTION
Provides full assurance that tires can be recapped safely!



ACCURATE BUFFING
Precision-done for better adhesion of tread to tire body!



EXPERT BALANCING
This step alone can mean up to 25% more low-cost mileage!



NEW TIRE RUBBER
The same high-quality tread rubber used in new General Tires!

KRAFT SYSTEM RECAPPING

IS AUTHORIZED

ONLY BY THE

GENERAL TIRE & RUBBER COMPANY

"Railroad" the IC Act?

Continued from Page 122

the IC Act propose removal of much of the present regulations affecting carrier rates and charges. The new provisions are intended, according to the Report, to promote increased reliance on competitive forces in rate making in order:

"1. To have transportation enterprises function under a system of

dynamic competition which will speed up technical innovation and foster the development of new rate and service concepts.

"2. To enable each form of transport to reflect its abilities in the market by aggressive experimentation in rates and service in order to demonstrate to the full its possibilities for service to the shipping and traveling public."

Commenting on the rate proposals, a staff report of the National Traffic Committee (of the trucking

industry) says, "While the report itself lends lip service to a regulatory philosophy of providing a progressive and sound surface transportation system, the recommendations of the committee with respect to rate regulations and charges in the National Transportation policy make it quite clear that only the railroads would benefit from the new philosophy and the competing modes of surface transportation would be forced out of the competitive picture and the rail monopoly restored."

Maximum and Minimum Rates

In giving effect to the Cabinet Committee Report recommendations to restrict the power of the ICC over rates, the proposed legislation generally does two things:

1. It restricts the ICC to prescribing maximum or minimum rates only.
2. It sets forth a new "rule of rate making."

In determining whether the charges proposed are more than a "just and reasonable maximum," the proposed legislation says the Commission "... shall not require such charges to be reduced below the full cost of performing the services to which they apply, exclusive of losses in other services."

The proposed legislation includes no definition of a "just and reasonable minimum rate" nor any guide for the Commission to follow. The Cabinet Committee Report's recommendation that rates should be considered "... unreasonably low when not compensatory, i.e., when they fail to cover the direct ascertainable cost of producing the service to which the rates apply," was not incorporated into the proposed legislation.

Under the proposed legislation, the Commission, in determining a minimum reasonable charge, cannot "... consider the effect of such charge on the traffic of any other mode of transportation; or the relation of such charge to the charge of any other mode of transportation; or whether such charge is lower than necessary to meet the competition of any other mode of transportation."

While the Commission, under the proposed legislation, could still in-

(TURN TO PAGE 126, PLEASE)

Here's why
PUROX BLOWPIPES
Trade-Mark
 cost so little to use
 and maintain



- **SELF-SEATING VALVES**
 Reseat scored valves when turned tight.
- **RUGGED HANDLE ASSEMBLY**
 Wear-resistant bronze front body—heavy-walled seamless tubes—pressure forged valve body; all built for long, trouble-free service.
- **SLIP-FIT "O" RINGS**
 Eliminate critical metal-to-metal gas seals. Easy to replace.
- **MIXER IN EACH HEAD**
 Delivers perfect gas mixture for easiest and best work. New design resists backfires, eliminates burnouts.
- **SWAGED, PURE COPPER TIPS**
 Streamlined gas flow and exceptionally stable flames. Heads snap in and out of handle. No wrench needed.

The PUROX W-202 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N.Y. In Canada, Linde Air Products Company, Division of Union Carbide Canada Limited, Toronto.

GET IT FROM YOUR **LINDE** JOBBER

The terms "Purox" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

"My Chevrolet Dealer is my partner in service!"



**Take it from a leading
Fleet Owner:**

"The time element in our service is extremely important. We're interested in keeping as many cabs as possible operating and collecting fares. You can see how important it is to us to get prompt service and the right Chevrolet parts quickly. Nobody can beat our Chevrolet dealer at this."

**MR. JACK PLOTSKY
METRO OPERATING SYSTEM
LONG ISLAND CITY, NEW YORK**

Mr. Jack Plotsky pays a visit to his Chevrolet dealer's parts department.

You get these 4 Big Benefits



1 Reduced maintenance time and costs

Prompt delivery of parts cuts maintenance time. Chevrolet parts are easier to install and, because they are designed for long life, can help reduce maintenance needs.



2 More dependable truck operation

Your service work is more reliable when you use Genuine Chevrolet Parts for replacement. The parts are precision-built to do their job dependably and efficiently.



3 Technical help in service problems

Booklets like the Repair Manual help you solve tough service problems quickly. In many ways like this, your Chevrolet dealer is really your partner in service!



4 Complete line of parts

Your Chevrolet dealer is one, sure, convenient source for all Chevrolet parts. He can provide them in quantity, deliver them promptly.



**Your Chevrolet dealer is ready, willing
and able to serve you better than ever!**

"Railroad" the IC Act?

Continued from Page 124

investigate rates and charges on its own motion or on complaint, it could not act on any rate falling between the "just and reasonable minimum" and the "just and reasonable maximum."

Rate Wars

Since the Commission would be

without power to prescribe rates falling within this so-called "zone of reasonableness," i.e., between the legal minimum and maximum, it would be left for the carrier to vary his rates within this zone to meet competition and attract more freight.

Where competition between carriers is not in effect (in certain geographical areas, on certain classes of traffic, among certain shippers), the legislation is expected to result in rates as high as "the

traffic will bear." On the other hand, in competitive situations, rates will tend toward the minimum as the competitive carriers seek to drive each other out of business in a destructive "rate war."

ATA Staff Report

In a staff analysis of the Cabinet Committee Report on Transport Policy, ATA says this about the rate making proposals:

"The Advisory Committee's adoption of the cost of service theory of rate adjustment would have the inevitable effect of driving the trucking industry out of business. . . . The rail cost advantage in the transportation of large volumes of freight at all but the shorter distances means that on all traffic for which they now compete with trucks, they would be able to cut rates to a level which the motor carriers could not meet and stay in business. Whereas virtually all of the traffic of the motor carriers is handled competitively with the railroads, a much smaller proportion of the rail traffic is truck competitive. Therefore, a rate war between the railroads and the trucks can only end in disaster for the trucks, since the trucks have no non-competitive traffic upon which to levy the cost of the battle."

Volume Rates

As asked for in the Cabinet Committee Report, the proposed legislation adds a new paragraph (Paragraph 4) to Part I, Section 15a of the IC Act, legalizing incentive minimum rates or volume rates. They could be established by all types of carriers subject to the Act. Included in the new paragraph is the provision that such rates "... which are established for the purpose of meeting competition of other modes of transportation shall not be construed or held to constitute unjust discrimination, or undue or unreasonable advantage, preference, or prejudice."

Says the Commerce Counsel of a Chamber of Commerce (Fargo, N. D.), "The implications are obvious. To meet . . . competition . . . the railroads can establish lower rates on multiple car movements reflecting lower costs inherent in such movement. A large manufac-

(TURN TO PAGE 128, PLEASE)



MR. GUARANTEE SAYS:

More Profits?

"USE ALL 3 NEAPCO!"



**UNIVERSAL JOINTS
AND PARTS**



CHASSIS PARTS



**POWER TAKE-OFF
JOINTS**

You will be a lot happier with Neapco!

Besides the extra profits with Neapco's lines, you'll be enjoying the Quality, Completeness and Availability they offer!

There's a type and size to fit every application on all 3 lines; they're all competitively priced; they're available immediately thru strategic warehousing and distribution. You can't use better Quality, and this is backed up by Neapco's famous rock-ribbed guarantee.

Neapco will make good dollars and sense for your shop (it has in thousands of other shops in the country). Ask your Neapco Jobber for full particulars.

Neapco Products Inc.



Pottstown, Pa., U. S. A.

Universal Joints...P.T.O. Joints...Chassis Parts

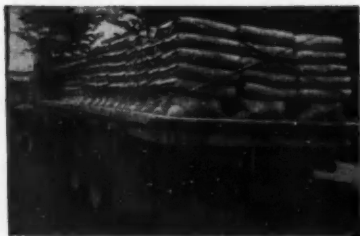


Says Olson Motor Service:

"TACHOGRAPHS AND CITIES SERVICE FOR TOP EFFICIENCY"



Vice President J. B. VANDE CREEK examines tachograph chart, one of many modern techniques that have increased efficiency of Olson's 125 vehicle fleet.



TOUGH LOADS . . . TOUGH LUBRICANTS. Olson's hard-working tractors are kept in top condition by Cities Service C-300 Motor Oil and Trojan Greases.

Dual tachographs and Cities Service Lubricants—that's the combination that's really paid dividends to Olson Motor Service, operators of a 125 vehicle trucking fleet in Milwaukee, Wisconsin.

Installed in Olson's high mileage units, the tachographs provide a permanent record of engine RPMs, hours of operation, mileage, and road speeds. This serves two purposes. First, it aids in establishing better operating practices. Second, it enables lubrication practices tailored to the specific requirements of the operating conditions revealed by the tachographs.

This desire for exact information is typical of Olson's thoroughness. So, too, were the numerous laboratory tests and experiments which resulted in their choice of Cities Service Lubricants. In each case, the reward has been great. Says Vice President J. B. Vande Creek: "As a result of our switch to Cities Service C-300 Motor Oil and Trojan Greases and Gear Lubes, failure of wearing parts has been greatly reduced and maintenance costs minimized."

Yes, that's Olson's record with Cities Service . . . and a similar record can be yours also when *you* start using the Cities Service line. For more information, contact your nearest Cities Service Office or write: Cities Service Oil Company, Sixty Wall Tower, New York 5, N. Y.

CITIES  SERVICE
QUALITY PETROLEUM PRODUCTS

"Railroad" the IC Act?

Continued from Page 126

turer capable of consuming such a volume will receive lower rates. A smaller user in the same city incapable of using the prescribed volume will pay higher rates. . . . The small transportation user . . . will find himself out of line competitively."

It is felt that the new provision

would be interpreted to allow motor carriers to publish truck load rates while allowing railroads to publish train load rates. At the same time, the railroads would be allowed to establish incentive minimum weights comparable to truck load minimum weights.

The proposed legislation would permit common carriers to charge less for a longer haul than for a shorter haul over the same line or route when such a charge (1) is

necessary to meet actual competition from other carriers and (2) is not less than a "just and reasonable minimum charge." This last part has little effect in the light of the proposals defining a "just and reasonable minimum charge" discussed above. The proposed legislation also eliminates the need for prior ICC approval of 4th Section rates.

The same criticism is made of the proposed provisions here as in the case of volume rates. Communities and shippers not located on competitive transportation routes would be placed at a rate disadvantage.

Rate Suspension

Basic changes proposed in the Report and the legislation affecting the rate suspension powers of the ICC would (1) limit the suspension period to three months instead of seven as permitted at present and (2) place the burden of proving the proposed rates unlawful on the protestant when the protestant is a carrier.

Shortening of the suspension period, in the light of present suspension hearings, would allow most protested rates to go into effect before investigation into their lawfulness could be completed. Since the rule for determining if a rate is unreasonably low would presumably be when such a rate fails to meet the direct ascertainable cost of producing the service, it becomes a practical impossibility for the protesting carrier to show the rate unlawful. The protesting carrier does not have available for his use the cost records of the carrier proposing the rate.

Under the proposed legislation, regulation affecting reduced rate transportation for the government would be transferred from Part I, Section 22 to a new paragraph (Paragraph 5) of Section 15a. It requires such rates be subject to the tariff filing and publication requirements of the IC Act. It further provides that such rates may be filed on short notice or made retroactive.

The proposed changes also state that such rates shall not be subject to suspension or to the provisions of Part I, Section 4 of the IC Act, discussed above.

END

Please Resume Reading Page 76



STOP

BURNING UP RUBBER!

USE A
HANDY
GOVERNOR

KS

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN

Rug

The Ansul
beating o
extinguish
test with
estimate t
hard road

Ansul's
agent used
of engine

The vibr
10-pounds

COMMERCIAL



Rugged 10-lb. Ansul fire extinguisher built for truck protection

The Ansul 10-pounder is *designed and built* to take the beating of year-in, year-out truck use. This new extinguisher survived a 250-hour vibration-impact test without a single part failure. Ansul engineers estimate that this test was the equivalent of 10 years' hard road use.

Ansul's "Plus Fifty," the dry chemical extinguishing agent used in the 10-pounder, makes short, fast work of engine fires, tire and brake lining fires and cargo

fires. The high fire killing rating (B1, C1) of this unit gives full fire coverage the instant it's needed.

A serious truck fire results in lost operating revenue, makes it difficult for you to provide "on-schedule" service for your customers. Your local Ansul Man can show you how a fire protection plan for your fleet can avoid costly truck and cargo losses and help to maintain your reputation for dependable service. Adequate fire protection is the best fire insurance you can buy.



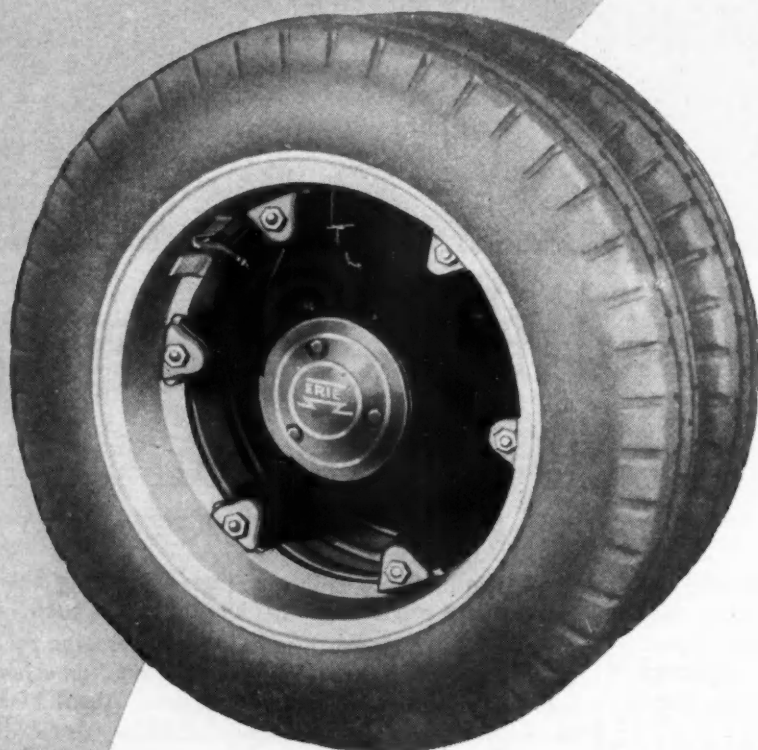
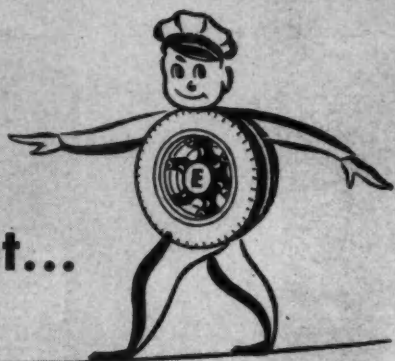
The vibrator-impact machine puts Ansul 10-pounder through 250-hour torture test.

Call the Ansul Man!

Get in touch with your local Ansul Man through the "yellow pages" or write Ansul Chemical Company, Fire Equipment Division, Dept. F-66, Marinette, Wisconsin. Write Ansul for your copy of new Fire Equipment Catalog.



**Perfect
Alignment...**



The self-adjusting rim bolts of Erie Wheels permit rim clamps to seat firmly on the spoke ends and to adjust themselves to any variation in rim tolerances. This feature assures a tight assembly, lessens the chance of rim slippage and minimizes misalignment.



IT COSTS NO MORE TO SPECIFY

ERIE *Wheels
Brake Drums*

ERIE MALLEABLE IRON COMPANY • Erie, Pennsylvania

Fleet Training Courses

HERE is 1955's calendar of fleet training courses. For complete addresses to write to for full information about the courses, see COMMERCIAL CAR JOURNAL'S November, 1954, issue, page 237.

Fleet Supervisor Courses

- Sept. 12-16 — Pennsylvania State University.
- Sept. 19-23 — Purdue University (Indiana).
- Oct. 31-Nov. 4—University of Minnesota.
- Nov. 14-18—University of Michigan.
- Nov. 28-Dec. 2—University of Akron (Ohio).

Driver Training

North Carolina State College (one month long courses starting Oct. 3, Oct. 31, Nov. 28).

Terminal Management

- Oct. 11-13 — Pennsylvania State University.
- Dec. 7-9—University of Tennessee.

Top Management Conferences

- Sept. 29-30 — Pennsylvania State University.

Fleet Maintenance Courses

- Sept. 19-23 — Rutgers University (New Jersey).
- Sept. 26-30 — University of Oklahoma.
- Oct. 3-7—University of Alabama.
- Oct. 10-14—Tulane University (Louisiana).
- Nov. 1-3—Oregon State College.
- Nov. 7-9—Montana Motor Transport Assn. (Billings).



"I have the wheels packed—Where do I send them?"

"Tachographs

are important to our Speed Control Safety Program in cooperation with New Jersey Turnpike Authority"*



QUAKER CITY BUS CO.
1215 ARCH STREET
PHILADELPHIA 7, PA.
LOCUST 1-5857

NEW YORK
PHILADELPHIA
ATLANTIC CITY

Wagner Electric Corporation
6400 Plymouth Avenue
Saint Louis 14, Missouri

Gentlemen:

All of us here in the East are justly proud of our modern, safety engineered highways. As an interstate bus operator, we feel a measure of responsibility to foster and promote the fine standards of road safety that have been established for the protection of all.

Our 38 buses provide express service via the New Jersey Turnpike between Philadelphia, Camden and New York with local intermediate service. Tachographs are installed on all our units and have been instrumental in our rendering the finest of passenger service. They are easy to install, and are quiet and reliable in operation. Their accuracy has enabled us to fully recognize driver ability and general handling and are important to our Speed Control Safety Program in cooperation with New Jersey Turnpike Authority.

As Safety Supervisor I know Tachographs have been a wise investment for Quaker City Bus Company.

Very truly yours,
N. S. Moyer
Norman S. Moyer
Safety Supervisor

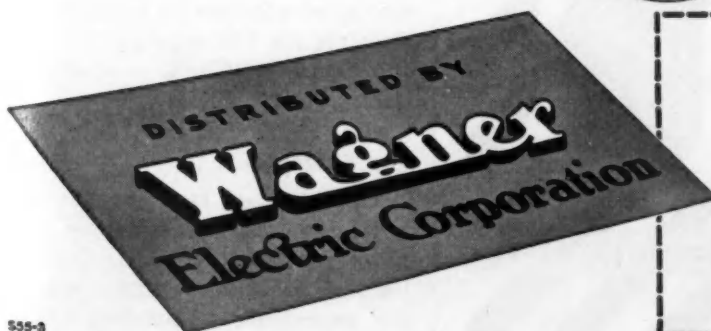
* says: **NORMAN S. MOYER**, Safety Supervisor
QUAKER CITY BUS COMPANY, Philadelphia, Pa.

The many proven advantages TACHOGRAPHS provide are adaptable to all types of fleet operation—whether bus or truck. Mr. Moyer's letter cites the example of increased road safety as one of the basic advantages. In addition, TACHOGRAPHS help operators maintain "on-time" schedules, recognize and reward good driving habits and allow more economical over-the-road operation through reduced maintenance costs.

TACHOGRAPHS are available in two models: M.P.H. or R.P.M. They may be easily mounted on the dash of all vehicles in your fleet and are directly connected to the speedometer cable. Before the start of each run or at the beginning of a day's operation, a wax-coated chart is inserted inside the durable aluminum case. It is on this chart that all movements of the vehicle are accurately and automatically recorded.

- When engine started
- When it stopped—and for how long
- How long it idled
- Distance traveled between stops
- When vehicle was in motion
- How fast it traveled

Besides this graphic analysis, TACHOGRAPHS visually indicate time of day, m.p.h. or r.p.m. and total mileage. To promote greater road safety, TACHOGRAPHS are equipped with a red signal light which flashes on to warn the driver when a predetermined speed is exceeded. For added safety and greater operations economy get the full facts on the benefits your fleet may enjoy from TACHOGRAPHS. Mail the coupon below for your free copy of WAGNER Bulletin SU-3—it gives full details and data.



Wagner Electric Corporation

6476 PLYMOUTH AVE., ST. LOUIS 14, MO.
Please send a copy of Bulletin SU-3.

Name and Position _____
Company _____
Address _____
City _____ State _____
We operate _____ Vehicles
(NUMBER)

535-3

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMoX BRAKE LINING • AIR BRAKES • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES

COMMERCIAL CAR JOURNAL, September, 1955

Safety Center Protects Fleet and Driver

Continued from Page 91

regulations. Some of those men were rehabilitated so they could continue driving. Others were transferred to other jobs.

Another original subscriber to the program is Los Angeles Seattle Motor Express. They have 200 line drivers and 75 local drivers in

the Seattle area, all of whom are required to take the test once a year.

"It's just good sense to have our drivers take these examinations," says L. H. Smith, the company's road superintendent. "When a guy is driving a \$35,000 rig hauling up

to \$100,000 worth of cargo, a \$7.50 examination is just a drop in the bucket. Even if the ICC did not require examinations we would have our drivers take these tests.

Nominal Cost

"The Center provides a service that is better than that available from the average physician and at a nominal cost. We accept their findings without question, and whenever they find a man can't meet the requirements, we take him off the truck until the condition is corrected. Where that is not possible, he just has to be retired from driving."

There is general agreement as to the inadequacy of many examinations given by practicing physicians. They are not usually familiar with the regulations and do not understand the purposes of the examination. They may either pass the man without adequate knowledge of his condition or submit him to a lot of tests which are unnecessary, and expensive. There can obviously be no standardization of procedures, so that one man with a mild heart condition might be rejected while another with a serious ailment would be passed. It is as unfair to employees as to the employer, and can give rise to all sorts of misunderstandings with the men and the union.

The personal element also enters freely into many of these private examinations, explains Mr. Macdonald.

"A man will usually take his examination form to his private physician, who may have brought him into the world and treated his family for years. With all best intentions, the doctor may give him a thump on the chest, make a few other routine checks, and sign the application. And as a personal friend who knows his patient's job depends on his passing the test, the doctor will have a strong incentive to be lenient."

For Example . . .

The kind of trouble that can build up out of employee and union reaction to a physical examination program is indicated by the experience of another opera-

(TURN TO PAGE 136, PLEASE)

Safe...at Lower Cost

DIETZ



No. 324 REFLECTOR FLARE KIT

- 3 Reflex Reflector Flare Panels
- 3 Red Enameled Metal Bases
- 2 Red Danger Flags (12" x 12")
- 2 Flexible Metal Flag Staffs
- 1 Red Enameled Mounting Bracket



No. 324 REFLECTOR FLARE KIT

- 3 Reflex Reflector Flare Panels
- 3 Red Enameled Metal Bases
- 1 Red Enameled Mounting Bracket

NEW REFLEX REFLECTOR FLARE KIT

- Economical
- Lightweight
- Compact
- Lucite Lenses
- Practical
- Flexible Staffs
- Approved by Electrical Testing Laboratories

No. 324-F REFLECTOR FLARE KIT

- 3 Reflex Reflector Flare Panels
- 3 Red Enameled Metal Bases
- 2 Red Danger Flags (12" x 12")
- 2 Flexible Metal Flag Staffs
- 1 Red Enameled Mounting Bracket

No. 324 REFLECTOR FLARE KIT

- 3 Reflex Reflector Flare Panels
- 3 Red Enameled Metal Bases
- 1 Red Enameled Mounting Bracket

R. E. DIETZ COMPANY • SYRACUSE 1, N. Y.

To Air...

INSTALLATION KITS!

DURABILITY



That Keeps Your Trucks on the Road

Rugged, powerful Bendix-Westinghouse Air Brake equipment is engineered and built with two things in view: to provide maximum braking performance at all times, and to stand up under the most severe operating conditions. Regardless of age, your air brake equipped vehicle retains the same "stop-ability" it had the day you took delivery. First choice of over-the-road haulers and public transit systems for twenty-five years, Bendix-Westinghouse Air Brakes can take it—and give plenty in return.

COMFORT



That Eliminates Physical and Mental Fatigue

Comforting and comfortable—it's the smoothest braking system ever developed. To the driver it means less physical effort and improved mental attitude, better safety records, greater efficiency and higher morale. A slight pedal pressure is all that's needed to bring tremendous braking power into play—no leg strain at all—just easy, smooth, consistent braking that gives you or your driver added confidence every mile you drive—and every time you stop.

every make and model truck—see your

Bendix-Westinghouse distributor today!

Bendix-Westinghouse

THE WORLD'S MOST TRIED AND TRUSTED **AIR BRAKES**

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY
General Offices and Factory—Elyria, Ohio • Branches—Berkeley, Calif.; Oklahoma City, Okla.



Safety Center

Continued from Page 132

tor, who found through the clinic that one of his drivers had a critical heart condition.

"The man had requested that he be put on sick leave for a minor ailment," this operator explained. "That was early summer of last year, before the examination center was set up for operation. He

was gone for several months, and when he reported back for work, we had him go through the clinic like the rest of our employees. They reported to us that his 'minor ailment' was a serious heart condition that could not be corrected, and that would make him a menace behind the wheel of a truck. His absence from work had been caused by heart attacks, and he was just recovering from the third.

"The employee refused to accept the clinic's report, and instead went back to his private physician, who wrote on the bottom of the examination form that the man was physically able to perform the work, which was arduous, without reservation. We of course could not accept the doctor's report, and the man took his case to the union.

"As co-sponsor of the Center, the union did not ignore the Center's report, nor could it give the man a peremptory brush-off. The union's official suggested that the driver take a third examination, this one given by a doctor selected by the union, and at the union's expense. The man could hardly refuse to do so, and the union's doctor confirmed the clinic's findings at every point. We kept the man on the payroll for about six months longer to give him a chance to find other work, to which by that time he had adjusted himself.

"Had a situation like this been precipitated under almost any other set-up, I'm sure we would have been in for some deep and costly trouble."

Union Cooperation

The device of "co-sponsorship" is a necessary element to the success of such an enterprise, Dr. Seth believes. In a case like the above, the union would inevitably be predisposed against the clinic's findings if the center had been supported financially by the association. Union financial support would make it equally suspect to trucking operators. And the fact that the clinic does not treat for disabilities it discovers, removes any possible taint of self-interest in that direction.

It is equally necessary to do a thorough job of "selling" the union on the necessity for such a program, he believes. There are enough long-term advantages of such a program for the employees that a case can be made that is almost overwhelmingly convincing, Dr. Seth believes. In this enterprise, the Teamsters Union cooperated readily and intelligently as co-sponsors of the clinic.

Although Dr. Seth is owner and operator of his own clinic, he ac-

(TURN TO PAGE 138, PLEASE)



GROTELITE "70"
REFLECTOR FLARE
*gives **MAXIMUM** emergency warning!*

No. "70" Available in Sets of 2 or 3 flares, with and without flags, in compact metal carrying case only 3" x 4 3/8" x 8 1/2".

Grotelite "70" unfolds instantly, automatically locks into upright position. In seconds, it's protecting your truck front and rear from onrushing traffic. Flare digs in, stands firmly even in 50-mile wind. Brilliant Grotelite shatter proof reflectors alert and warn at the greatest possible distance . . . provide two-way protection. Exceed all S. A. E. and I. C. C. requirements for truck and bus emergency warning signals.

Check your specific needs with the complete Grote line of truck safety equipment. See your Jobber today . . . or write for information.



Lamps • Directional Signals • Reflectors • Flares • Mirrors

Distributed throughout the U.S. and Canada

THE GROTE MANUFACTURING CO., INC., Bellevue, Ky. • Opposite Cincinnati

Be Safety-Sure with GROTELITE Weather-Proof STOP & TAIL LAMPS

Model No. 215
Features 3 1/2" dia. plastic prismatic lens with metal rim door. Plug type, stud mounting.



Model No. U-218
Features one-piece plastic prismatic lens and door. Plug type, universal mounting.



Over 20 models available to fit all stop and tail lamp applications.



CEMCO

TRAILER JOCKEYS

Now you can rent them!

Nothing finer for speedy spotting of trailers at terminals!

The nation's leading truckers are using them—and reordering! Cuts trailer spotting time by 80% over the conventional hand-cranking set-up.

A CEMCO gives you 37,500 pounds of hydraulic lifting power at the center line of the fifth wheel. (1) Back under the parked trailer, (2) Apply the power (without even leaving cab), (3) Up goes the trailer, clearing the landing gear, (4) Away to a new location, and (5) let the trailer down gently, then unlock 5th wheel from trailer (driver still stays in cab)—the whole job completed in a matter of minutes.

RENTAL PLAN . . .

A simple, attractive rental plan is available. In most cases the savings alone will pay the rent. Rental payments can apply towards the purchase price if you wish. Write for details — and Trailer Jockey specifications.

Cemco Industries, Inc.

GALION, OHIO, U.S.A.

CEMCO Industries, Inc.
Galion, Ohio

Please send folder and prices ☐

Please get in touch with us ☐

Name

Street and No.

City

State

Safety Center

Continued from Page 136

cepts guidance from an advisory committee that consists of three elected members from both the trade association and the union. This assures good co-ordination on all policy matters.

Financial support is on a strictly voluntary basis, it being left to operators of the trucking concerns

whether or not they will have their men take the examinations. However, the association has given wide publicity to the Center, in meetings and in their monthly publication, as well as in a special illustrated brochure that they recently published. Dr. Seth also serves as Medical Director of the association, without compensation, a position that enhances his and the Center's prestige with association members.

Examination at the Medical Examination Center includes the interview and checks of the heart, lungs, and blood, and a urinalysis for a thorough general physical. X-ray examinations are extra. Carefully standardized procedures assure that the individual meets all minimum ICC standards.

Vision Tests

Vision tests in the Driver Safety Center are as thorough and complete as modern testing devices can make them. They are given by Mr. Paul Fouts, manager of the Center who is an experienced safety engineer. They include:

1. Examination with a Telebinocular. This is an optical instrument that tests visual acuity with a number of different tests, and reveals many unsuspected defects.

2. The Peripheral Vision device. This measures side vision of both eyes in a positive manner.

3. The Depth of Vision device. This measures the individual for balanced visual acuity, revealing the driver's ability to judge distance accurately on the highway.

4. Traffic color recognition. Actual traffic signals are used for this, with lenses that are interchangeable to avoid deception.

5. Tests with the Complex Reactor. This tests the so-called "psycho-physical" reactions of the driver, in which actual driving conditions are simulated by automatic flashing signals indicating changing traffic conditions.

6. Glare Recovery. An unusual device called the Feldman Adaptometer is used for this, and tests drivers positively for the condition known as night or glare blindness.

At the end of the tests Mr. Fouts has a brief interview with the men tested and advises them of the results and their significance. He emphasizes that the eyes are a driver's most important physical equipment, and that if they are under a strain it fatigues the driver mentally. If drivers fail to pass the minimum requirements for any test, he advises what they should do to correct or compensate for the defect.

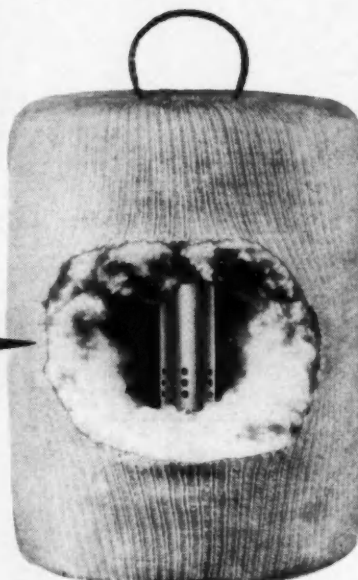
The purpose of the tests is not (TURN TO PAGE 142, PLEASE)

Amazing . . . New

W.G.B.

white SUPER
CLAR-O-FEX

Outperforms all oil
filtering mediums!



Cutaway view showing White Super Clar-O-fex in W. G. B.'s new Deluxe cartridge, employing a steel, tin-plated, amply perforated tube and bottom plate for efficient oil distribution and cartridge support.

Now Available in W.G.B. Replacement Cartridges for all popular makes of filters...

Out of W. G. B.'s continuing research now comes one of the greatest of the new-day advancements in oil filtration. It is the amazing . . . new . . . on-the-highway-proved White Super Clar-O-fex! Snow white in appearance—and exceptionally light in weight—White Super Clar-O-fex has an exceptionally high cleansing capacity, with an inherent ability to maintain a proper flow of oil. Further, it does not remove the detergents and other additives put in by the refiner—even though it clarifies the oil far beyond the point expected of filters when detergent oil is used.

W. G. B. White Super Clar-O-fex is now available in W. G. B. Replacement Cartridges for all popular makes of filters.

Write for complete details and name of nearest distributor.

SPECIFY W.G.B.
REPLACEMENT
CARTRIDGES
AND GET
**ALL THE
LUBRICATION
GOOD OIL
PROVIDES**



W. G. B. Cloth-type
Cartridges



W. G. B. Deluxe
Cartridges



W. G. B. Can-type
Cartridges

W.G.B. OIL CLARIFIER, Inc.

KINGSTON, NEW YORK

l Ex-
ne in-
heart,
alysis
sical.
extra.
dures
meets

safety
com-
eices
en by
f the
safe-

lebin-
nstru-
y with
, and
fects.
evice.
f both

evice.
al for
ealing
re dis-
hway.
n. Ac-
ed for
inter-
on.

ex Re-
called
of the
driving
r auto-
cating

unusual
Adap-
d tests
condi-
blind-

. Fouts
he men
of the
ce. He
are a
hysical
ey are
es the
fail to
ements
at they
pensate

is not
(ASE)

ber, 1955



prove
it for
yourself!

WORLD BESTOS RED BLOCK

- ▶ stops brake fade
- ▶ gives more mileage
- ▶ saves on drums

Heavy-duty fleet operators in all parts of the country have proved beyond doubt that RED BLOCK gives safe, dependable stopping power . . . every time . . . under the most severe operating conditions.

Their records, covering millions of miles on the job, prove also that RED BLOCK gives more mileage between relines, reduces drum breakage, and cuts brake maintenance cost to a new low!

Prove it for yourself! Try World Bestos RED BLOCK on your biggest, hardest-working rig. Let your own experience convince you. Call your World Bestos Distributor, or write direct to New Castle for full information and prices.



RED BLOCK is engineered exclusively for heavy duty trucks and trailers in extremely severe service.

World Bestos gives you
MORE STOPPING POWER



WORLD BESTOS

NEW CASTLE, INDIANA

SOL-SPEEDI-DRI

THE NATION'S NO. 1
OIL AND GREASE ABSORBENT

*new!
improved!*

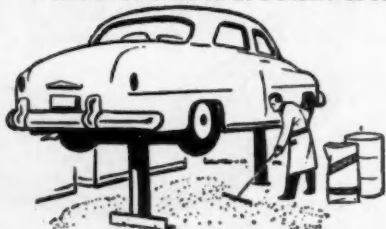


Now, more than ever before, Sol-Speedi-Dri is the answer to your safety and maintenance problems. Vastly improved, Sol is now lighter in weight . . . has greater volume . . . each 50-pound bag goes farther. It absorbs more oil and grease and other liquids . . . requires less frequent replacement . . . offers new freedom from dust nuisance. And Sol's hard granules take more traffic than ever . . . keep floors slip-resistant!

See for yourself. Try the new, improved Sol-Speedi-Dri! Send for a free sample . . . and the new "101 Uses" folder.

SPEEDI-DRI CORPORATION 210 W. Washington Sq., Phila. 5, Pa.

A SUBSIDIARY OF MINERALS & CHEMICALS CORPORATION OF AMERICA



For cleaner, safer floors

Warehouse stocks and sales service maintained in principal cities of the United States and Canada.

In Canada, address inquiries to G.H. Wood & Company, Ltd., Toronto. Branches throughout Canada.

SPEEDI-DRI CORPORATION Dept. CCJ9

210 W. Washington Sq., Phila. 5, Pa.

☐ Send free sample ☐ Send "101 Uses" folder

Name.....

Address.....

City..... State.....



Safety Center

Continued from Page 138

exposure of the below-par driver but his rehabilitation. If visual acuity is below minimum, for example, the man is told to see an eye specialist to correct the condition. With some of the other deficiencies, it may be enough simply to warn the drivers of their effects and to exercise greater caution under conditions where the defects could cause trouble.

Rehabilitation

One case in point was a driver who had faulty depth perception and had glasses but did not wear them. It was found that one eye was deficient in acuity but the other was normal. The reason he did not wear his glasses was that they caused severe headaches. This suggested that the glasses over-corrected the defect, causing eye strain. That turned out to be the case, as the difficulty vanished when he was fitted with the proper glasses.

Another case was turned up of a driver who had a night run over the mountains to eastern Washington and whose vision troubled him. When tested on the Adaptometer it was found that he was troubled with "night blindness." The solution for him was to shift him to a day run instead, where he is one of the company's best drivers.

Because the clinic is set up specifically for testing, cost of the examinations is low. For an individual, the tests plus screening and X-ray are similar to those given to truck drivers cost \$10. To fleet operators, however, the charge is only \$7.50 per man for the combination of general physical and visual-and-reaction tests.

The other major industrial group tested in the Center is cannery workers, but tests are given to any industry or individual who requests them. The Center now renders examinations to some 37 life insurance companies as well as airlines, ship lines, contractors, banks, and a number of others.

END

Please Resume Reading Page 92

GIVE 36% LOWER COST PER MILE



"NYLON CORDS give us more than *twice* the mileage we got from ordinary tires. They've cut our costs per mile 36%," reports George Anderson, Jr., Vice President, Anderson Trucking Corporation, East Orange, N. J.

"Our 36 trailer trucks haul concrete pipe to construction sites ranging from Boston to Washington. Loads run up to 18 tons, and tires take a terrific pounding both on and off the highway. Four years ago we started using nylon cord tires to reduce costs per mile. Since then, we've gotten more mileage and more recaps. Road delays due to tire failure have been cut 40%."

Air Breakaway Systems . . .

Continued from Page 76

lishes a fully automatic method by substituting a governor for the driver control valve and by eliminating the exhaust port through which the trailer emergency line may be vacated.

Another manufacturer, Fig. 3, of

the same school of piping, introduces pressure from the cab through a one-way check into the downstream side of the emergency line. This pressure against its diaphragm overpowers the spring to force both lines into the open position. With

the supply line being orificed at the valve, any break downstream will so reduce the pressure against the diaphragm as to give the spring an opportunity to close the valve. A second spring may then close the application line.

This valve operates automatically when reduction of pressure in the trailer supply line is reduced to the thrust of the spring, thus permitting the springs to close the orifice.

This unit also includes a two-way check valve where the lines from the hand valve and the foot valve merge. On tractors without hand valves some other means would be necessary to introduce the downstream pressure with which to open the valve. If the trailer application line only should part it would necessitate the time necessary to vacate the tractor reservoirs to the point of setting up the trailer emergency brake before any braking would be available.

Piping Plan No. 2

The remaining five tractor protection devices all install a relay valve in the application line (Fig. 4) using the diaphragm in the relay valve to block and to dead-end the tractor application line on its way to the trailer.

The relay valve solves the problem of the application line ever becoming an open conduit when the tractor brakes are applied. In this arrangement the trailer pressure

(TURN TO PAGE 150, PLEASE)

PERFORMANCE

AT ANY ALTITUDE!
AT ANY TEMPERATURE!



CENTURY LP-GAS CARBURETORS

Individually Designed
because it's a METERING VALVE TYPE



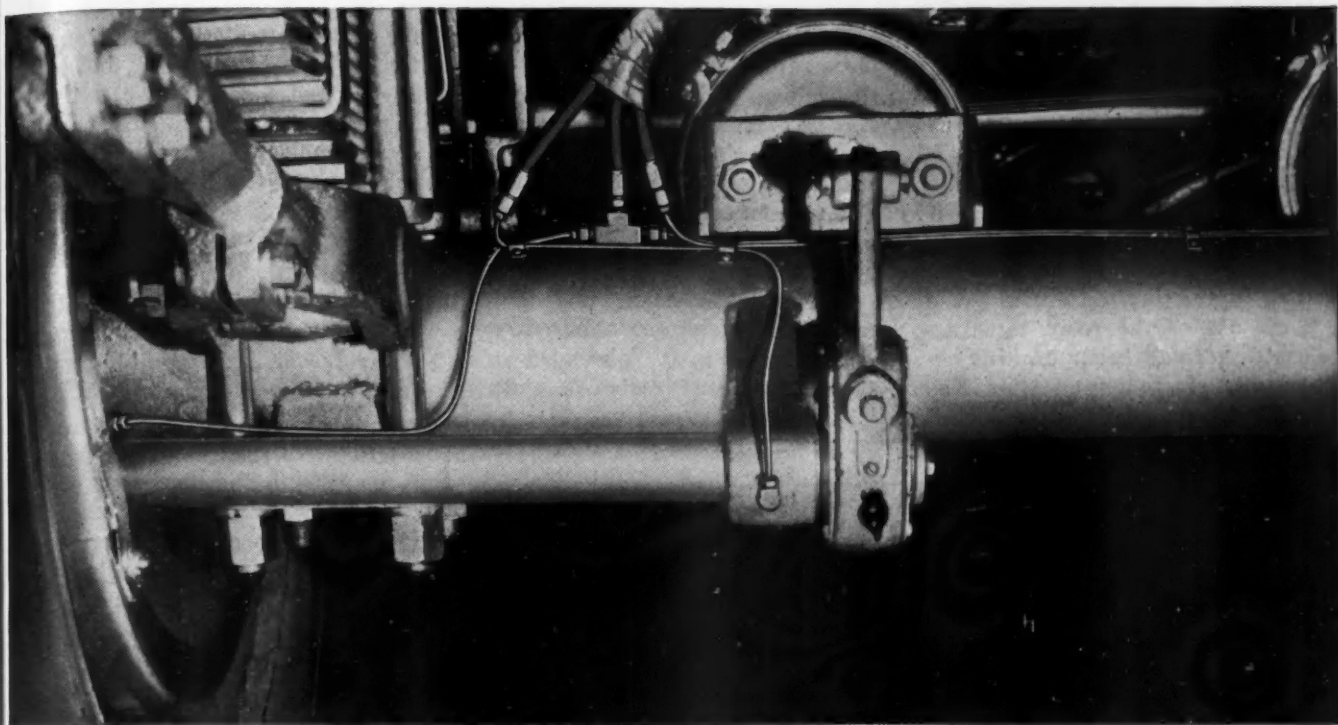
STARTS INSTANTLY upon installation.
GIVES INSTANT POWER—no choking or fluttering.
IDLES PERFECTLY.
BALANCES POWER of each cylinder.
NO MULTIPLE ADJUSTMENTS—tune up only.
PERFORMS AT ALL speeds to pre-set perfection.

CENTURY GAS EQUIPMENT CO.
11188 Long Beach Boulevard, Lynwood, California

Easy Starting! Perfect Idling! Economy!



"Well, here on the map, it looked like an overpass!"



Close-up views of Lincoln Multi-Luber Power Lubrication installations on trailers owned by HUSMANN & ROPER FREIGHT LINES

an average maintenance saving of 90% POWER LUBRICATION"

YOU CAN OPERATE A LARGER FLEET...
WITH LESS MAINTENANCE!

Slash your maintenance overhead with Lincoln Multi-Luber Power Lubrication. Complete kits are available for a wide range of installations. Systems can be installed in a few hours by any maintenance mechanic, without special training or special tools. Systems are air-operated, automatically delivering the correct amount of lubricant to each bearing every time the driver actuates the air brakes. The only maintenance required is to refill the central lubricant reservoir once every 7,500 miles.

FOR FULL INFORMATION...mail this coupon today...

LINCOLN ENGINEERING COMPANY
5703 Natural Bridge Ave., St. Louis 20, Missouri

Please send me information on Multi-Luber Power Lubrication Systems for Truck-Trailer installation.

Name.....

Company.....

Address.....

City.....Zone.....State.....

LINCOLN ENGINEERING COMPANY
5703 Natural Bridge Avenue • St. Louis 20, Missouri

*Trade Name Registered Patent Pending

NATIONAL SALES AND SERVICE THROUGH LEADING WHOLESALERS

COMMERCIAL CAR JOURNAL, September, 1955

Air Breakaway Systems

Continued from Page 146

supply line also provides a pressure supply to the relay valve. When use of the tractor brakes opens this relay valve the application line to the trailer takes pressure from the trailer supply line.

Such use of the relay valve accelerates normal trailer braking because the tractor application line

being shorter will accrue pressure more rapidly than if it traveled all the way to the rear of the trailer and be of consequently greater capacity. Transmission time for the trailer application line pressure is also less because of the lesser distance that it has to travel. We simply have two men running fifty yards simultaneously instead of one man running the hundred.

Use of the relay valve also acts as an additional moisture ejector

for both the trailer supply line and for the trailer application line. With any of these relay valve methods, and with a parted application line, any attempted use of brakes will spill the trailer supply line and put the trailer into emergency braking.

One manufacturer using the relay valve in the application line uses no shut-off valve whatever. Instead, he takes the trailer supply from the wet reservoir at a point upstream from the one-way check valve.

Breakaway in this case leaves the tractor with such residual pressure as may be in the dry reservoir at that moment. The wet reservoir and the compressor are lost and there is no pressure rebuilding until repairs have been made.

Piping Plan No. 3

In piping plan No. 3 (Fig. 5), the closing of a shut-off valve in the supply line prevents any spillage from the tractor, either directly or through the relay valve. This method has two exponents with their differences appearing within their shut-off valves.

Valve 1 might be called the breather type. Upstream pressure greater than the spring setting of 50 to 55 lb causes the diaphragm to over-power the spring and open the line to the relay valve and to the trailer. Pressure less than the spring permits the spring to close the valve.

In the second valve in this piping, we get our first look at a pressure closing shut-off valve. It consists of two diaphragms, the upper of

(TURN TO PAGE 153, PLEASE)



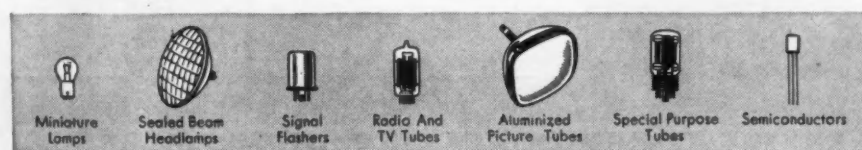
The 12-volt model of the new Vision-Aid Headlamp that gives 80 extra feet of seeing distance and eliminates the glare-back of rain, fog and snow is now ruggedized for truck and bus fleet use.

Ruggedized construction means longer, trouble-free service under the most severe operating conditions. A center support keeps the top filament from sagging . . . prevents shorts and premature burnouts.

Reduce fleet maintenance costs. Assure new operation efficiency. Switch to ruggedized Tung-Sol Vision-Aid Headlamps.

TUNG-SOL ELECTRIC INC., Newark 4, N. J.

Sales Offices: Atlanta, Chicago, Columbus, Culver City, Dallas, Denver, Detroit, Newark, Philadelphia, Seattle. Canada: Montreal.



"Every time he thinks it's time to eat, he sits down in the back of the truck!"

Air Breakaway Systems

Continued from Page 150

which has a greater effective area than the lower. The two are tied together with a bolt and must therefore move in unison. The valve is opened manually and closed automatically.

By manually moving the bolt, pressure is permitted to flow through the bolt and to cover both sides of the top diaphragm to the end that the top diaphragm becomes dormant. In this situation, the lower diaphragm being exposed to atmosphere on its lower side acts to move the bolt downward off the ceiling permitting a free flow through the valve in either direction. The valve remains open at any pressure level.

With the flow being orificed through the bolt, the breaking of a line downstream will spill the pressure from the top side of the top diaphragm.

In this situation and with incoming pressure between the two diaphragms, the upper or larger diaphragm will dominate to move the rubber covered bolt against the ceiling to close the valve.

The holding open or the closing will be determined by the relative pressure in the upstream and the downstream lines. Any desirable drop of downstream pressure before the valve closes may be arranged.

Piping Plan No. 4

Piping Plan No. 4 (Fig. 6) varies from 3 only that it suggests a cab mounting for the shut-off valve. The cab mounting is not mandatory and these valves may be mounted at any desirable location in the supply line. The cab control takes the place of the trailer supply line previously used. Through this cab control valve passes the only pressure delivered to the trailer either directly or through the trailer application line.

The first in this arrangement contains an orifice to separate its upstream and its downstream compartments. It is spring loaded to close automatically on loss of downstream pressure or it may be manually closed. It is manually opened.

The second valve of this arrange-

ment also uses the orifice to separate its upstream and downstream sides. It is pressure balanced to remain open at any pressure level but to close automatically should pressure on its downstream side drop to a predetermined percentage of the upstream pressure.

When this valve closes it vacates the trailer supply line to set up trailer emergency brakes. This unit is manually opened and may be manually closed. It also closes au-

tomatically upon loss of downstream pressure.

Choice of options in the selection of tractor protection valves are somewhat as follows:

Devices activated by springs or by pressure.

Piping arrangement 1, 2, 3, or 4.

Manual or automatic opening.

Manual or automatic closing, or both.

END

Please Resume Reading Page 78



STORE-TO-DOOR... EFFICIENTLY

If your delivery costs are too high because some of your trucks are Backtracking . . . Idle Too Long . . . Not Doing Their Share . . . Covering Too Large An Area, Servis Recorders will help you make the necessary corrections. Servis Recorders are your assurance of maintaining pinpoint scheduling, your guarantee of efficient store-to-door deliveries.

One type Servis Recorder, the Model DS, is designed to keep fuel and maintenance costs at a minimum by recording the exact periods your trucks are at a standstill with the motor running.

Thousands of Servis Recorders are used daily by many of the nation's largest department stores and parcel delivery systems.

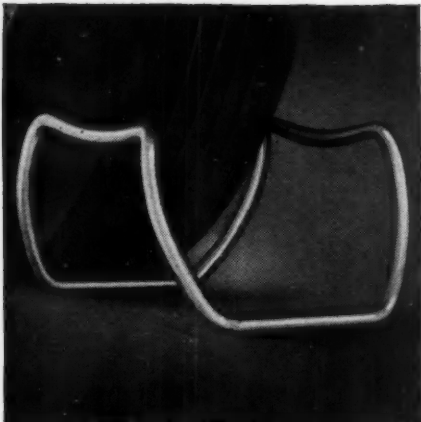
Write today for free booklet—
"Ten Ways of Getting More Work Out of Motor Trucks."
THE SERVICE
RECORDER CO.,
1375 F Euclid
Avenue, Cleveland 15, Ohio.

The Servis Recorder
Tells Every Move Your Truck Makes



CAMPBELL CHAINS

Foul-weather Friends!

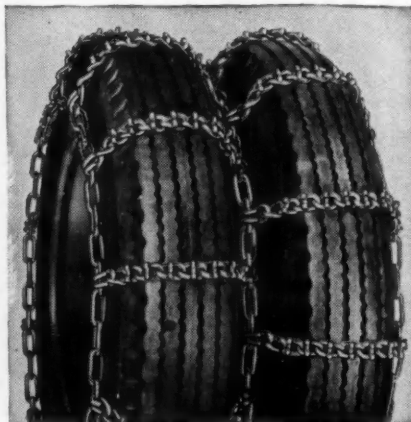


"TRACTION KLIPS" for Emergencies

Just tuck a "Klip" under each rear wheel. Roll on—and out of trouble! Campbell "Traction Klips" get you out of ruts, up slippery hills, away from icy gutters. And, even if your wheels are spinning, the "Klips" will be picked up instantly. Handy remover-tool gets "Klips" off in seconds. For emergency use on passenger cars, taxis, light trucks.



Tested and Certified by
Motor Vehicle Research, Inc.



TRUCK AND BUS CHAINS in Three Grades

Protect your profits and your drivers from the hazards of winter weather. Campbell Truck and Bus Chains are available in every size . . . for every type of service. *Lug-Reinforced* for maximum traction and wear—*Highway Service* for general use—*Mud Service* for off-the-road use. Color-coded bags save handling time—make identification easy. Ask your jobber to recommend the correct Campbell Chain for the job. If you prefer, write direct.

"KWIK-ON" TIRE CHAINS—ON THE WHEEL IN LESS THAN A MINUTE

Complete chains for continuous use—yet on in just a minute a wheel! No need to jack up or move vehicle. When time means money—here's the quick, easy way to keep your fleet on the move in any weather! *Lug-Reinforced* or Regular cross chains.

CAMPBELL CHAIN Company

MAIN OFFICE, YORK, PA.

West Burlington, Iowa; Portland, Oregon; Sacramento, Calif.

Chain for every need . . . industrial . . . marine . . . farm . . . automotive

Aluminum Dump Body

Continued from Page 89

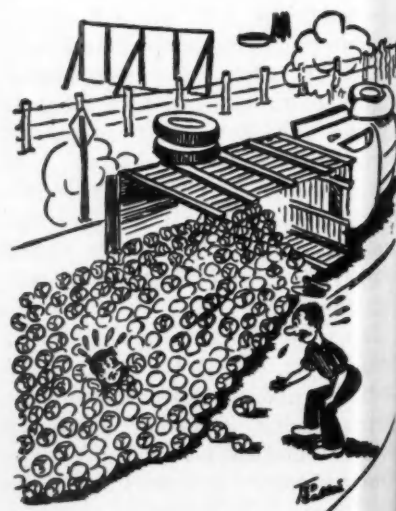
welding was done by the shielded tungsten arc process with alloy 4043 welding rod. As of this date, no repairs have been necessary. The weight saved by the aluminum body permits the user to carry an additional 1000 lb of sand per trip. This increased load is worth nearly \$1,000 a year in added revenues.

Faster, Stronger Welds

The use of new inert-gas, shielded arc, consumable electrode welding machines has greatly accelerated welding speeds in body building. In one typical example, the newest consumable electrode process showed a welding speed of 30 in. per minute on butt welds with sheet 3/16 in. thick as compared with 16 in. per minute for the tungsten arc process. With automatic equipment, speeds as high as 60 to 80 in. per minute are possible.

Alloy 5154, in combination with the new building methods, permits an increase in strength of 25 per cent across a welded aluminum joint. These developments have also resulted in an improvement of 150 per cent in ductility across the welds. With such improved properties, a greater fac-

(TURN TO PAGE 156, PLEASE)



"Harry . . . are you . . . all . . . there?"

90 ARO REELS

*For Detroit
Street Railway!*



ARO PRIME - LUBRICATOR



Goes Anywhere!

The *only* self-propelled, self-powered portable lubrication unit . . . ideal for fleet operators! Complete including 3 reels, 3 pumping units, air compressor, and 6 H.P. four cycle gasoline engine. Write for details.

In the world's motor center—this installation of 90 ARO Overhead Reels speeds up fleet maintenance in this modern bus-service garage. Each 9-reel battery services two lifts with chassis, gear lubricant, motor oils, air, water and anti-freeze. Six ARO Heavy-Duty Pumps located in lube storage room efficiently serve the 90 reels.

Aro dependability pays off with fast, clean service . . . saves labor, reduces costs! Let ARO help you with your fleet lubricating problems.

See your ARO jobber

THE ARO EQUIPMENT CORPORATION

Bryan and Cleveland, Ohio

Aro Equipment of California, Los Angeles, Calif.

Aro Equipment of Canada, Ltd., Toronto 15, Ontario

Offices in All Principal Cities

ARO

LUBE EQUIPMENT

Also . . . Air Tools . . . Aircraft Products
. . . Grease Fittings



Aluminum Dump Body

Continued from Page 154

tor of safety is possible and the dependability of joints in welded aluminum structures is considerably increased.

Aluminum Can Take It

Welded aluminum construction offers a 50 per cent weight saving over steel construction. Since alu-

minum weighs only 1/3 as much as steel of the same thickness, common practice is to increase the aluminum sheet gage by 40 per cent to obtain equivalent stiffness. The resulting weight is still only one-half the weight of steel. Aluminum sheet of 40 per cent thicker gage than steel has equivalent stiffness, and 2½ times the impact resistance of the steel sheet.

The weight differential permits

deeper and thicker structural sections with wider flanges for attaching accessories and supporting members. Stiffness and rigidity equal to that of steel are obtained, while the overall structure is stronger and has greater resistance to impact. For special applications, aluminum extruded shapes provide sections with wide, thick flanges where the metal is needed and thus increase the efficiency of the member per pound of metal used.

Welded aluminum construction for dump bodies has been proved in service. Although the main advantage to the operator is increased revenue through increased payload, the advantages of corrosion resistance, increased tire and gasoline mileage, and increased time between brake and engine overhauls result in lower operating and maintenance costs for the vehicle.

END

Please Resume Reading Page 90

Divco Dividend Series

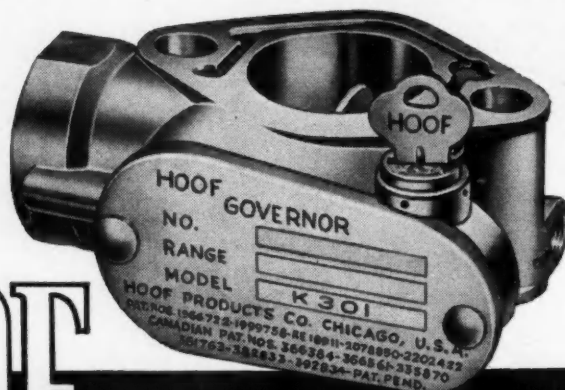
Continued from Page 87

Emphasis was put on ease of maintenance accessibility in the construction of this vehicle. All parts of the engine and transmission are easily reached from the interior of the cab by removing the access panels, which are treated with sound and heat-resistant materials. All structural members, floors and all members below the floor level are constructed of high-tensile steel.

Other features are extra rugged chassis, low steps and the adaptability of the truck to an unusually wide range of optional items and accessories such as: flat floor, drop aisle floor, or split level floor; insulation and refrigeration systems; dual rear wheels; a variety of bulkhead doors; heater; governor; various types of wide-opening rear doors and other accessories. Tubeless tires may be obtained on the new trucks at no additional cost.

END

Please Resume Reading Page 88



HOOF GOVERNORS

give you the two most important factors in any fleet operation...

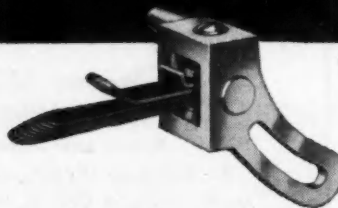
ECONOMY

SAFETY

Fleet operating figures prove the dollar-wise effectiveness of HOOF Governors in all vehicles... greater gas and tire mileage, less maintenance and repair, fewer accidents.

After more than 28 years there's still no single item bought that costs so little, saves so much.

Exclusive patented Cantilever Spring assures Hoof's more accurate speed control, simplified construction and longer life.

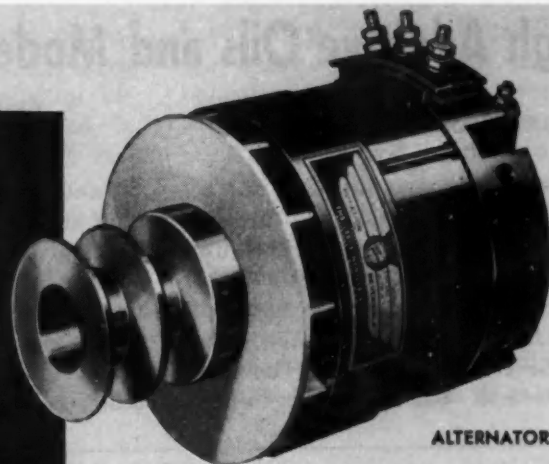


Write for specific facts on your operations.

HOOF PRODUCTS CO.

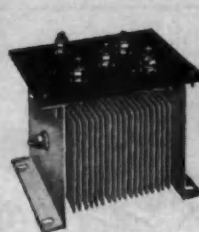
6543 So. Laramie Avenue • Chicago 38, Illinois

Leece-Neville



ALTERNATOR

RECTIFIER



REGULATOR



New AC-DC

ALTERNATOR SYSTEM DELIVERS 125 Amps

Weighs only 44 lbs.

Costs much less than comparable d.c. system

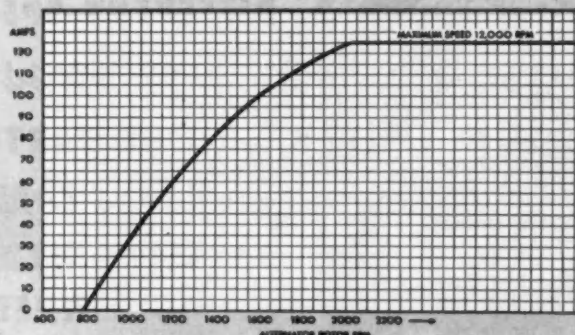
At the price you formerly paid for a 100 ampere L-N Alternator System, you now get 125 amperes ... and at a cost far below that of a d.c. generator.

Built on a 6 5/8 inch diameter frame, the Alternator weighs only 27 lbs. Rectifier and Regulator bring the total weight of the generating system to only 44 lbs. Compare that with the weight of a d.c. generator of the same output and you'll find an important weight saving.

The performance curve shows the low cut-in speed and rapid attainment of full output. Charging current at engine idle speed will vary with drive ratio.

This new L-N Alternator System is ideally suited for many types of vehicles with 12 volt electrical systems: buses, trucks, trolley coaches, school buses, fire trucks, mine and construction equipment. For applications requiring a fan-cooled rectifier, an Alternator with a shaft-mounted fan at rear is available.

PERFORMANCE AT 12 VOLTS



There are L-N Alternators with capacities ranging to 95 amperes for 6 volt systems; to 180 amperes for 12-volt; to 100 amperes for 24 volt; and to 50 amperes for 32 volt. All of them have the rugged design and precision manufacture that give L-N Alternators unmatched reliability and long life. Be sure to specify Leece-Neville.

Since 1946, L-N Alternators have been helping fleet owners cut operating and maintenance costs. For all the facts, write The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities . . . service stations everywhere.*

**YOU CAN
RELY ON**

Leece-Neville

Automotive Electric Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



D C GENERATORS



CRANKING MOTORS



REGULATORS



SWITCHES



SMALL MOTORS

High Additive Oils and Modern Engines

Continued from Page 95

deposits, it was found that due to the basic or alkaline nature of these agents corrosive wear could be greatly minimized. This characteristic of the old Supplemental 1 oil has been generally accepted, but to review it Fig. 1 shows a comparison between a premium

oil and a Supplemental 1 level oil in a severe cold room engine test procedure.

The Supplemental 1 level oil reduces wear approximately 80 per cent as compared to a premium type oil in this test. Another very interesting feature

with regard to another type of corrosion is the ability of the Supplemental 1 type oils to resist rusting of engine parts.

Valve Train Wear—There is considerable published data on the cause of this wear as well as what may be done with lubricating oil to minimize it.

Ambrose and Taylor have reported on the results of a laboratory investigation of some of the factors responsible for wear, scuffing and spalling in passenger car engines and have indicated that the following conclusions may be valid:

1. Wear of piston rings and valve lifters and spalling of certain valve lifter materials may be significantly greater for oils of low viscosity, such as SAE 5W/20 or 10W, than for higher viscosity oils such as SAE 20 or 30 oils of similar formulation.

2. Scuffing of steel lifters invariably results in high camshaft lobe wear. While the cementite was formed during the carburizing process, it is possible that lubricating oil quality contributes to scuffing since this phenomenon has been experienced only with oils having poor or borderline anti-wear properties.

3. The inclusion of certain E.P. (anti-wear) additives in lubricating oils reduces valve lifter and piston ring wear but may increase spalling of chilled cast-iron lifters.

4. Valve lifter wear data predict piston ring wear for wide variations in oil quality; however, such data may not be a good index of piston ring wear when only small differences in valve lifter wear are obtained.

5. The detergency level of oils does not appear to have a definite effect on valve lifter wear or spalling.

6. Use of an oil with good anti-wear characteristics for engine break-in does not guard against future valve lifter wear if the engine is operated with an oil having poor anti-wear characteristics.

Pre-Ignition and Octane Requirement Increase—All distill-
(TURN TO PAGE 161, PLEASE)



14" & 24" Lifting Heights

Reinforced to Carry Any Weights with Little or No Service

Less Parts to Lubricate

Pays for Itself by Labor Saving in 90 Days

Saves Repairs to Trailers

For Busy People Who Want to Cut Costs NOW! Unlimited Lifting Capacity for Piggy-Back Operations. Now Used by All Truckers, Railroads, Excavators. Roller Unloading.

"RECOGNIZED AS THE BEST"



CONTROLS • VACUUM OR AIR OPERATED
IT CAN BE INSTALLED BY A LOCAL DEALER IN YOUR CITY OR IN YOUR OWN SHOP
PRINTS FURNISHED FOR INSTALLATION

BARTLETT TRAILER CORPORATION

3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1160



High Additive Oils . . .

Continued from Page 158

late motor oils for minimizing pre-ignition and octane number requirement increase have been the subject of considerable interest in recent months. The Gulf Research & Development Co. has accumulated data which indicates that the use of distillate stocks assists in minimizing both of these conditions. On the other hand, this data shows that distillate stocks are not the complete or only answer. It is believed that the refining process and careful selection of oil stocks are important factors whether the finished product is all distillate or contains some heavier fractions.

The data indicate, in these tests at least, that an all distillate product does not necessarily guarantee the best control of pre-ignition or octane requirement increase tendencies.

Modern Oil

It is now evident that by use of adequate levels of detergent agents, anti-wear agents, and properly selected and refined distillates, or almost all distillate base oils; engine deposits can be controlled, wear on piston rings, cylinder walls, and valve train parts can be minimized, and some relief in pre-ignition and octane

requirement increase can be obtained. In order to obtain these advantages some lubricating oil manufacturers have believed it necessary to select the high viscosity index, multi-vis type of oil which is generally a light distillate plus a relatively large amount of a viscosity index improver. Others believe that the same results can be obtained with natural SAE grades.

There are several reasons which

have led to the development of the multi-vis oils; some are of benefit to the lubricating oil manufacturer; some to the engine manufacturer and some are of benefit to the automobile owners. They are primarily recommended for passenger car operation, but sooner or later the SAE 10W/30 grades may be recommended for light-duty truck equipment.

The benefits which obtain to
(TURN TO NEXT PAGE, PLEASE)



Model 287 Driver's Seat



Model 230 Driver's Seat



Special Model 230 Driver's Seat with arms

Truck and Bus
Manufacturers add
sales appeal by
standardizing on

American Seating
**DRIVER'S
SEATS**

No. 0-4418 Light Delivery Tilt-Away Truck Seat

Write for
our latest
illustrated
catalog!



American Seating Company

WORLD'S LEADER IN PUBLIC SEATING

Grand Rapids 2, Michigan • Branch Offices and Distributors in Principal Cities
Manufacturers of Transportation, School, Theatre, Auditorium, Church,
Stadium Seating, and FOLDING CHAIRS



"The kid is looking for the jack right now!"

High Additive Oils . . .

Continued from Page 161

the lubricating oil manufacturer and retailer are that inventories and packaging costs are reduced since one compromise type oil will cover the same viscosity range as three normal SAE grades. The benefit to the engine manufacturer is reduction of pre-

ignition and octane requirement increase tendencies in service. The passenger car owner obtains the same benefits as obtained by the engine manufacturer.

Fuel Economy—Another of the advantages claimed for the multi-vis oils is fuel economy. It is the author's opinion that individual driving habits will vary fuel economy to a much greater extent than the type of motor oil used.

Intake Valve Deposits—In field

tests and in laboratory engine tests, it has been demonstrated that extended use of multiple viscosity motor oils results in excessive build-up of heavy deposits on intake valves. Bidwell and Williams also illustrate intake valve deposits on two conventional SAE 20/20W and two SAE 10W/30 multiple viscosity oils. This work shows considerably more deposit on intake valves with the multiple viscosity oils, both as to volume and weight, than on intake valves from engines using the conventional SAE 20/20W motor oils.

The Gulf Research & Development Co. has confirmed that excessive intake valve deposits are obtained from the multiple viscosity oils as compared to conventional SAE 20/20W oils.

Conclusions

From data obtained in laboratory engines and engines in field tests plus confirmation of such data in actual field service, it appears that:

High additive oils will minimize engine deposits in valve lifters, oil control rings, oil screens and other areas in the engine;

High additive oils plus an anti-wear agent will minimize corrosive wear and rust and wear on valve train parts; and

Current SAE 10W/30 motor oils as well as properly selected and refined natural SAE grade oils will help in minimizing pre-ignition and octane requirement increase but that the SAE 10W/30 motor oils manufactured under currently accepted formulations have several undesirable features such as intake valve deposits, body breakdown and higher consumption characteristics.

END

Please Resume Reading Page 96

Teacher: "Jimmy, if your father earned eighty dollars a week and gave your mother half, what would she have?"

Ignition Specialist's Son: "Heart failure."

PREFERRED

... for Simplicity and Accuracy ...

These **KIMBLE** Single-Solution Anti-Freeze Testers will make an instant hit with your men because they give the correct answers quickly and simply. Outstanding in every way, they are preferred because of—

SIMPLICITY — Testers are **DIRECT-READING**. The extra length, easy-to-read scale on the float and the big 10° graduations on the thermometer give you the correct answer fast.

ACCURACY — Made by the nation's foremost manufacturer of scientific glassware. Precision calibrated. Has big clear figures sealed under glass. Always stay clean and easy to read.

DURABILITY — Extra heavy fully annealed jar. Float is beaded to prevent sticking. Tip has non-roll, hex-shape base.

Ask for
Bulletin 398



Manufactured
by
Kimble Glass
Company
subsidiary of
Owens-Illinois



	Net Price to Fleet Owner
No. 548-TA for Ethylene Glycol such as "Prestone," "Zerex" etc.....	\$2.25
No. 550-T for Alcohol.....	2.25
No. 553-T for Methanol such as "Zerone," "Trek" etc.....	2.25
No. 554-T for Propylene Glycol....	3.00

No. 556-TA Universal Anti-Freeze
Tester tests all basic solutions of
alcohol, methanol and ethylene glycol.
Preferred for simplicity and accuracy.
Net Price to Fleet Owner.....\$5.50

THE IMPERIAL BRASS MFG. CO.
1209 W. Harrison St., Chicago 7, Ill.
In Canada: 334 Lauder Ave., Toronto, Ont.

IMPERIAL

Brass Fittings • Plumbing • Heat Exchangers • Radiators • Valves
Tube Working Tools • Drain Cleaners • Soldering Irons

Multi-Stop Delivery Truck



This is the 12', 130" wheelbase model of the Divco "Dividend" Truck with Super 6 engine and 4-speed synchro-mesh transmission. The "Dividend Series" will also include a 10', 117" wheelbase model.

★ ★ YOU ASKED FOR: ★ ★

GREATER MANEUVERABILITY. Divco's new "Dividend" Truck takes the sharpest turns in the narrowest alleys with ease. The large 12' model will completely turn around in a 40' street. It is as easily maneuvered as a small passenger car.

★ ★ YOU ASKED FOR: ★ ★

INCREASED VISIBILITY AND STREAMLINED STYLING. Divco's new "Dividend" Truck was designed with a wide, deep windshield which gives the driver visibility exceeding 200 degrees. Added safety has been achieved by increasing driver vision almost to street level in front of the truck. The sharp, clean lines of this new vehicle and its unique bus-like appearance set it apart from all other trucks on the road today.

★ ★ YOU ASKED FOR: ★ ★

GREATER ACCESSIBILITY TO ENGINE AND TRANSMISSION FOR MAINTENANCE. Divco's new "Dividend" Truck provides incomparable simplicity and ease of maintenance. All parts of the power plant are easily reached from the inside of the cab by the simple expedient of removing easy-to-handle access panels. For your protection and convenience, access panel to the engine is treated with sound and heat resistant materials.

IN ADDITION:

The latest technical advancements and improvements in Automotive Design provide you with these bonus features:

- Extra Rugged Chassis
- Greatest Possible Freedom From Corrosion
- Adaptability To An Unusually Wide Range Of Optional Features
- Improved Rideability At All Speeds

Phone your local dealer for full information and a demonstration ride . . . there's no obligation, of course!

TRUCKS

DIVCO CORPORATION, 22000 HOOVER ROAD, DETROIT 5, MICHIGAN

Fleetman's Library

Continued from Page 88

It is a 24-chapter, 670-page coverage of commercial motor transport by both truck and bus. It is divided into three major sections—property carriers, passenger carriers, highways. It includes discussion of operations, types of carriers, local cartage, specialized carriers, economics of motor transport, organization, terminal op-

erations, leasing, claims, insurance, freight classification and rates, sales, regulation and similar topics.

While the book might be criticized for its failure to give adequate space to a coverage of fleet maintenance, in other respects it is a thorough coverage of the industry every fleetman is a part of—the trucking industry.

Copies are available at \$6 each from Richard D. Irwin, Inc., Homewood, Ill.

Radiator servicing equipment is illustrated in many ways that should

be of interest to truck and bus fleet operators in this new booklet published by Inland Mfg. Co. For a free copy, circle L-4 on the postcard on page 84.

Federal-state relationships, including taxation and highways, are covered in the Report of the Commission on Intergovernmental Relations. It is available from Superintendent of Documents, Government Printing Office, Washington 25, D. C. Price is \$1.25. Ask for Catalog No. Y31n8/7:R29.

Federal-aid for highways is the subject of a special subcommittee report to the Commission on Intergovernmental Relations. Address is as above. Price is 25¢. Ask for Study Committee Report on Federal-Aid to Highways of the Commission on Intergovernmental Relations.

Materials handling equipment case histories are described in this booklet from Lewis-Shepard. It gives 25 ways to cut costs and time in freight handling. Circle L-5 on the postcard on page 84 for your copy.

Oil-hydraulic pumps, controls and accessories for shop equipment and vehicle auxiliary equipment are completely described in this new catalog from Vickers, Inc. Circle L-6 on the postcard for a free copy.

Load binders and related accessories made by Canton Mfg. Co. are covered in this interesting bulletin (TURN TO PAGE 168, PLEASE)

EXTRA "WALLOP" in Exide® —for extra long life!

Exide ULTRA START® Batteries retain their rated capacities for many extra months and miles. One big reason is the patented grid alloy, *Silvium*® that combats the two deadliest battery killers, *overcharging* and *sulphation*. Exide ULTRA START Batteries with *Silvium* stay healthier, deliver dependable power . . . both



in high mileage and stop-and-go driving. Cut your battery costs per-mile — equip your fleet now with Exide ULTRA START Batteries!

Write for your free copy of catalog
20-3: "Exide Heavy Duty Batteries"

Exide®

AUTOMOTIVE DIVISION

P.O. Box 8109 • Philadelphia 1, Pa.



"A telephone pole, Nelson, always has the right of way!"

FOR POWER

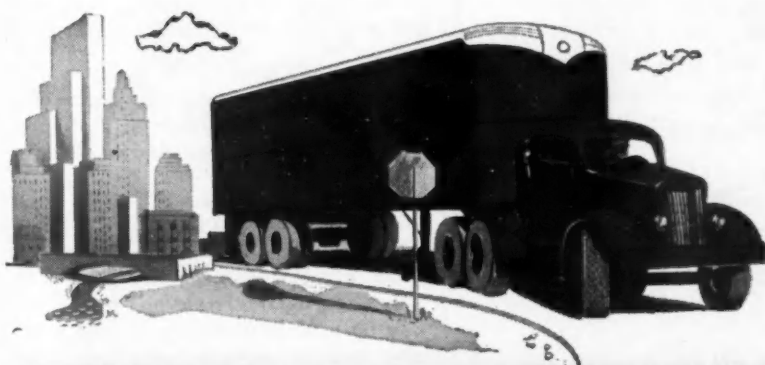
CHROME CONTROL

LEAK-PROOF

REG. U. S. PAT. OFF.

PISTON RINGS

This set will outperform
any other piston ring set in
the "hard-to-hold" jobs regardless
of kind, design or price.



FOR PROFIT

To make a profit you've got to keep your trucks
on the road and out of the repair shop.
That calls for *dependable* McQuay-Norris
parts. They're built to *last*!

McQUAY-NORRIS MANUFACTURING COMPANY



ST. LOUIS 10, MO.



"Gee whiz, Dad . . . the company gave you a Hamilton!"

Dad isn't really a hero, genius or record-breaker. But he has been dependable and on the job for twenty years—and didn't have to wait 'til the end of the road to receive recognition. He's only 42 and has many good years ahead. And, *the company* will benefit, too, judging from the look on Dad's face when he said: "Most watches tell only the time, but my HAMILTON tells how they feel about me!"

A good Service Award Plan helps keep morale high . . . which is good for productivity *and* profits.

Would you like to know why so many companies use Award Plans for Service, Sales and Safety achievement? Your first step is to mail this coupon for our helpful booklet, "How To Get The Most From An Employee Award Program."

More HAMILTON watches are awarded than all others combined

Hamilton



HAMILTON WATCH COMPANY
Presentation Sales Division, Dept. C-95, Lancaster, Pa.

Gentlemen: Please send me my copy of "How To Get The Most From An Employee Award Program."

Name _____

Title _____

Company _____

Address _____

City _____ State _____

Fleetman's Library

Continued from Page 166

you can get free by circling L-7 on the postcard on page 84.

Self-stowing hydraulic jacks for mounting on vehicles are described in this new bulletin from J. H. Holan Corp. They are used to make truck bodies level, should be of special interest to utility fleet operators. Circle L-8 on the postcard for your free copy.

Dump bodies in from 4 to 8 cu yd capacity made by The Heil Co. are covered in this new bulletin. Circle L-9 on the postcard on page 84 for your free copy.

Fire extinguishing systems using American LaFrance's Foamite Air-foam are described in this new 36-page booklet available free by circling L-10 on the postcard.

Truck accessories, including mirrors, lamps, directional signals, reflectors, flares, etc., made by Grote Mfg. Co., Bellevue, Ky., to meet ICC, SAE and state standards are described in a new catalog you can get by circling L-11 on the postcard on page 84.

Power lift gate in 600-lb capacity is described in this new folder from Daybrook Hydraulic Division, L. A. Young Spring & Wire Corp., Bowling Green, Ky. Circle L-12 for your free copy.

Lock nuts made by Standard Pressed Steel Co., Jenkintown, Pa., under the trade name "Flexloc" are described in this new folder. These one-piece nuts can be used as locknuts or stop nuts, are said to replace nuts and lock-washers, castellated nuts and cotter pins, or nuts and jam nuts. Circle L-13 on the postcard on page 84 for your free copy.

Fuel pumps made by Wells Mfg. Co., Fond du Lac, Wis., are described in this new catalog. Circle L-14 for your free copy.

Filter for shop air lines are described in this new catalog from R. P. Adams Co., Buffalo, N. Y. Feature of this filter is that it has no moving parts. Circle L-15 on the postcard on page 84 for your free copy.

Vehicle washer unit, the Oakite Foam Unit, is described in this booklet from Oakite Products, Inc., New York City. It describes the one-man, 12-min job possible with the unit. Circle L-16 for your free copy.

END

Please Resume Reading Page 89

Looking for Better Brakes?
Use....

BRAKE PRODUCTS

WHEEL CYLINDER REPAIR KIT



Contains all parts needed to restore a wheel cylinder to best possible operating condition.

MASTER CYLINDER REPAIR KIT



Contains every part necessary to put a master cylinder back in top operating condition.

DELCO SUPER 11 BRAKE FLUID



Exceeds S.A.E. and U. S. Government performance standards for heavy-duty fluid.

These original equipment service parts restore brakes to like-new efficiency . . . they give safer stops and *more* stops for every brake-repair dollar you spend.

Delco brake shoes are *brand-new shoes* protected with Di-Chromate to seal out rust, and *lined* with the same original equipment lining as supplied to vehicle manufacturers. Delco lined brake shoes have earned the respect of service men and fleet mechanics everywhere.

Both Delco Super 11 heavy-duty brake fluid and Delco Super 9 moderate-duty brake fluid *exceed* their respective S.A.E. and U. S. Government performance standards, including operating ranges, stability, lubrication, and corrosive effect on metals and rubber.

Delco brake fluids and lined brake shoes and repair kits for master and wheel cylinders are General Motors products—available through UMS distributors and GM car dealers everywhere.



moraine products

DIVISION OF GENERAL MOTORS, DAYTON, OHIO

A GENERAL MOTORS PRODUCT  A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

New Product Descriptions

Continued from Page 86

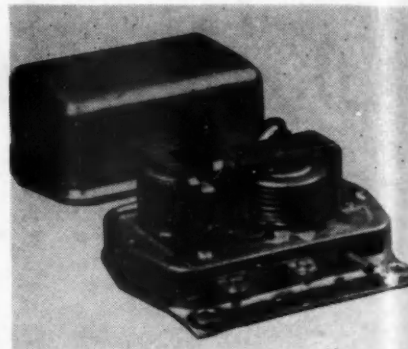
lb are pulled, lifted or carried in suspension, the new winch is adapted to either hand or power operation. The drum has a capacity of 150 ft of $\frac{1}{8}$ -in. cable or 80 ft of $\frac{1}{4}$ -in. cable.

P21. Anti-Lugging Control

P & H Engineering Co., Minne-

apolis, Minn., announces a vacuumatic anti-lugging control said to make it impossible for a driver to abuse a truck engine through failure to shift to the proper gear. It has two terminals which connect to the ignition distributor terminal and the generator feel post, and a bellows which connects by tube to the intake manifold. When

manifold vacuum falls below 1 in. the bellows rises and completes a circuit which re-routes the electrical impulse thru a resistor, decreasing the spark-



plug fire and causing the engine to lose power, without back-firing, so the driver is forced to shift to a proper gear to continue.

P22. Thermatic Fan Drive

Bendix Westinghouse Automotive Air Brake Co., Elyria, Ohio, has announced an air-operated thermatic



fan drive system to automatically control and maintain engine coolant temperature at the most efficient operation. (TURN TO PAGE 176, PLEASE)

Powerful... Portable...



Faster, lower cost cleaning before equipment repairs or repainting, is positively assured with New Series 1800 Hypressure JENNY.

Especially designed for extra-heavy-duty-service, powerful New Series 1800 has steam cleaning capacity of 180 gallons an hour, and up to 480 gallons an hour flushing and rinsing capacity. Two cleaning guns may be operated simultaneously.

Moreover, it is portable, which greatly widens the scope of its usefulness. It may be rolled easily from job to job... inside... outside... wherever needed. It is available on easy terms from your Jenny Jobber; and will pay for itself while it earns for you.

Additional features include...

- Automatic Electric Ignition
- Nozzle Control System
- Contamination Proof Water System
- Positive Displacement Pump
- Asbestos-Steel Vapor Hose... and many others

MAIL THE COUPON TODAY

Send me full information on Series 1800 Hypressure Jenny. I am interested in Jobber time payment plan. ☐

Name _____ Title _____

Company _____

Address _____

City _____ State _____

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING COMPANY

Serving Since 1892

P.O. Box 90

Coraopolis, Pa.

A
W
...an
th
locke

Every heavy
deliver more
ice out of
downtime,

Years of
that offers
special pro
has a choic
capacities
they were t
quality of f
dent in suc
and Inter-A

Unlike ord
propeller s
forward re
smoother t
ner operati

How TDA
wear! Wit
are mis-ma
rough grad
the other.
to do this v
when need
straight-th

T
A
ROCKWE

World

Plants at: De
New York



ARE PAYLOADS

with TDA[®] tandems

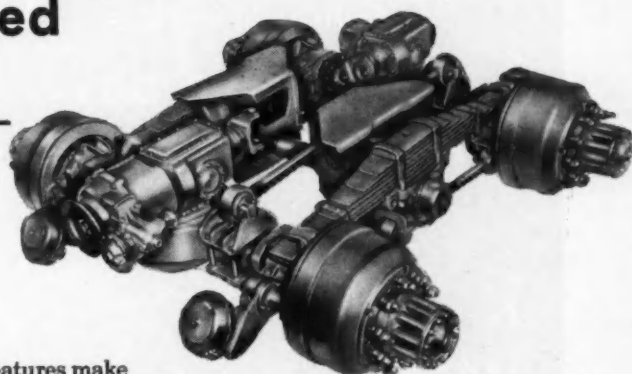
...and exclusive Timken[®] Inter-Axle Differential
that permits cab-controlled
lockout at any speed...

Every heavy trucker has two big problems to lick. *First*, to deliver more payload faster. *Second*, to get the most service out of his equipment . . . with less maintenance, less downtime, and lower operating costs.

Years of TDA leadership have resulted in a tandem line that offers each trucker the most helpful answer to his special problem. In the broad TDA Tandem line, a hauler has a choice of 3 types of final drives and in a full range of capacities . . . standard units that fit his need as though they were tailor-made. But, more important than this is the quality of the TDA product . . . a marked superiority evident in such exclusive TDA features as Straight-Line Drive and Inter-Axle Differential.

Unlike ordinary tandems, in TDA Straight-Line Drive, propeller shafts form an absolutely straight line from the forward rear axle back to the rearmost axle. This permits smoother transmission of power, no noisy around the corner operation.

How TDA Inter-Axle Differential cuts truck and tire wear! With cab-controlled lockout! When tandem tires are mis-matched . . . or when tandem trucks are going over rough grades . . . one set of wheels must turn faster than the other. TDA Inter-Axle Differential permits any wheel to do this when necessary. Also, with TDA, the driver can, when necessary, lock out the differential and obtain a straight-through drive in mud or sand.



These features make

TDA the *world's finest* tandem

drive rear unit for heavy-duty motor trucks! (1) Available in 3 capacities and 3 types of final drives — hypoid-helical double-reduction, optional inter-axle differential. Worm drive, without inter-axle differential. (2) Top-mounted straight-line final drive eliminates propeller shaft angularity. (3) Optional inter-axle differential . . . spur gear design, cab-controlled power-lockout. (4) Torsion flow axle shafts . . . guaranteed for 100,000 miles or three years, whichever occurs first. (5) Hot forged steel axle housing . . . guaranteed for the life of the vehicle. (6) Unit-mounted "P" series power brakes . . . for longer life, greater economy and efficiency. (7) Cradle ride spring suspension and paralleled torque rod system . . . maintain correct alignment and weight distribution regardless of driving and braking conditions. (8) Exclusive two-piece trunnion tube bracket speeds servicing. (9) Removable torque rod and spring guide brackets . . . for positive alignment, easier replacement. (10) Rubber torque rod bushings and rubber spring seat bushings . . . eliminate metal-to-metal contact. Require no lubrication.

TIMKEN *Detroit* AXLES

TIMKEN DETROIT AXLE DIVISION
ROCKWELL SPRING AND AXLE COMPANY
DETROIT 32, MICHIGAN



TRADE MARK REGISTERED

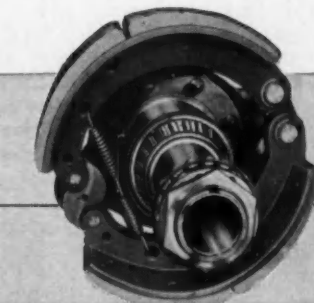
World's Largest Manufacturers of Axles for
Trucks, Buses and Trailers

Plants at: Detroit, Michigan • Oshkosh, Wisconsin • Utica,
New York • Ashtabula, Kenton and Newark, Ohio
New Castle, Pennsylvania

©1955 RS&A Company

**ONLY TDA BRAKES give
all these tested advantages!**

- Brake shoes made of steel save up to 40 pounds per axle . . . give strong braking action with no distortion
- Patented liner shape — thickest where wear is greatest
- Liners riveted on — no chance of movement on shoe
- Liners circle-ground to cover all efficient braking area of shoe
- Rust-proofed anchor pins locked in
- First with self-aligning camshaft housings
- Cam



- rollers heat-treated to roll smoother, wear longer
- First with all-Nylon camshaft bushings
- Compare similar products and prove to yourself that TDA brakes incorporate the finest quality materials, skilled workmanship and advanced design.

New Products

Continued from Page 172

erating level. A thermal element in a control valve either causes the engine fan to engage when more cooling is required or to disengage when engine coolant temperature falls below the desired operating temperature. Advantages cited are quicker engine warm-ups, reduction of sludging in engine lubricating oil.

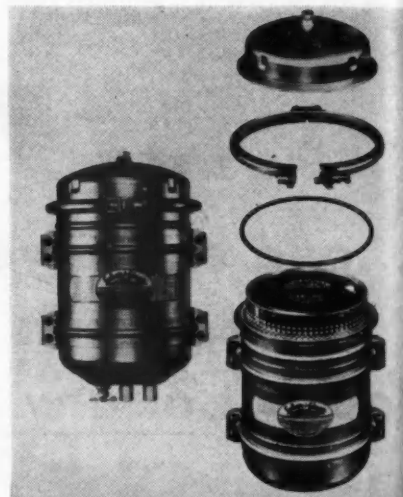
P23. Body Bumpers

Bumpers, Inc., East Cleveland, Ohio, is making rubber-coated fabric truck bumpers, capable of being mounted anywhere on a truck body to prevent damage to trucks, buildings or loads. Construction of the bumpers allows for the reversing of the fabric so that the life of the bumper can be doubled. Bumpers are available in three designs. Style "A" is specially designed for truck bed platforms and ICC frames. Those designated as Style "B" are for truck bed

platform corners, while Style "C" is used on ICC frames.

P24. Oil Filter

Luber-finer, Inc., Los Angeles, Cal., announces a new "Luber-finer" oil filter, the Model No. 272-C, developed for engines with up to 12 qt crank-case capacity. It has the same con-



struction features as the earlier announced 20 and 32-qt models. It offers a positive sealing "O" ring type gasket to assure leak-proof lid closure at all operating pressures. It has a screw-in type "Luber-fine" pack to assure a positive pack seal and eliminate possibility of oil by-passing the pack.

P25. Armature Growler

King Electric Equipment Co., Cleveland, Ohio, announces its Model No. G-219 growler. It is equipped with a meter and test prods for measuring armature output, and for checking



shorts, grounds, high resistance or incorrect number of turns on automotive armatures. It is claimed to also test brush holders, terminal posts and generator field windings for electrical losses.

END

Please Resume Reading Page 87

CHRYSLER

industrial engines **T00**

use **ALGAS LP-Gas**
carburetion equipment

for greater
low-cost
performance



For a wide variety of uses from irrigation to industrial plant operation, more and more Chrysler engine owners are now enjoying the advantages of LP-Gas because of advanced Chrysler engineering. In keeping with the increasing use of LP-Gas, Chrysler now offers industrial engines equipped for LP-Gas operation. In the selection of LP-Gas carburetion equipment for their industrial engines, Chrysler conducted many exhaustive tests under various load conditions to make sure that it would meet Chrysler's high standards of performance, quality and economy. ALGAS is proud that their equipment has been selected for this advanced Chrysler engineering.

AMERICAN LIQUID GAS CORPORATION

1109 Santa Fe Avenue • Los Angeles 21, California

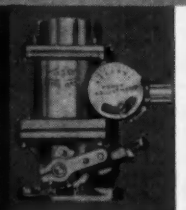
UL
Approved



670 Filter



1570-E Converter



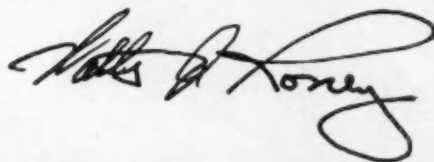
1400 Series
Carburetor

Established 1932

"We've piled up millions of miles of proof that Auto-Lite STA-FUL Batteries are the finest!," states W. A. Roney of Roadway Transit and Truck Transport, Detroit.

"Around-the-clock, around-the-calendar schedules put millions of miles on our 700 rigs — over 70 millions yearly. STA-FUL Batteries play an important part in meeting these tough schedules efficiently, economically.

"Auto-Lite STA-FUL Batteries pay off on the long haul in peak performance and low-cost operation!"



Walter A. Roney, President of Truck Transport Co. and Roadway Transit and Truck, Detroit, Mich., shown here on board his Lightning Class Sail Boat. With him are three of his five charming daughters.

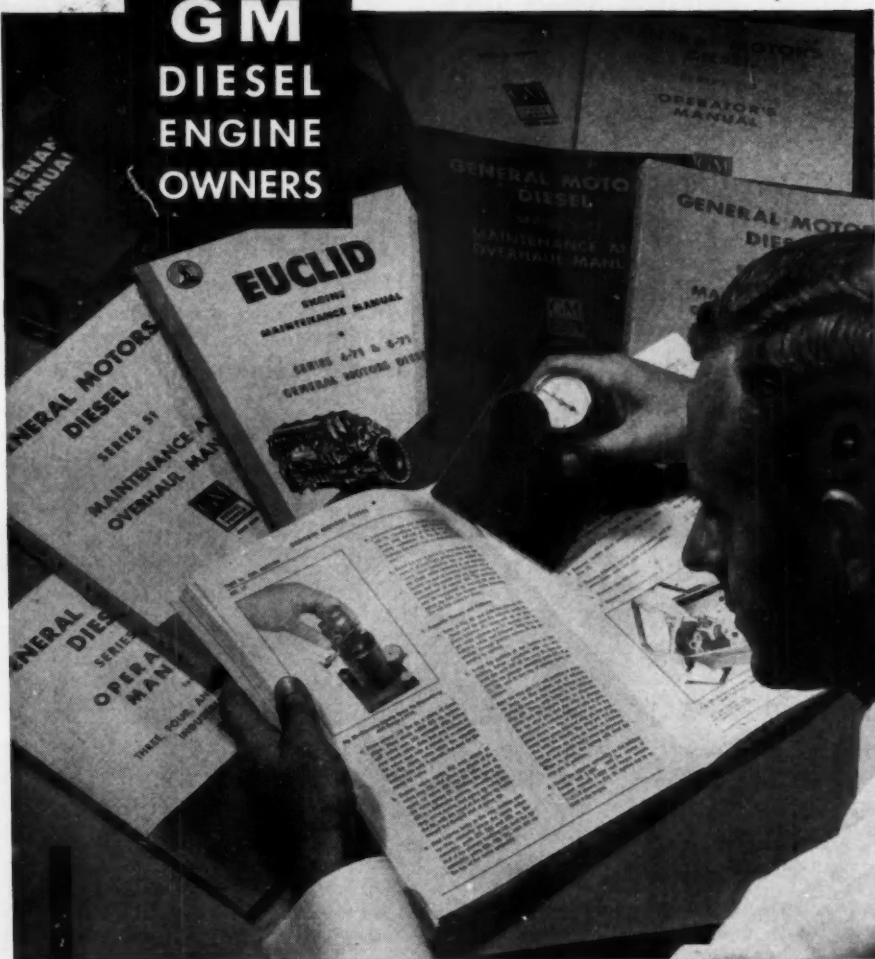


You're always right
with Auto-Lite

AUTO-LITE

BATTERIES

GM DIESEL ENGINE OWNERS



YOUR MAINTENANCE MANUALS TELL WHY YOU NEED KENT-MOORE **RATE-MAKER** SPECIAL SERVICE TOOLS!

When you bought "GM Diesel Power", Mister, you bought the best! And the one sure way to keep it best is to follow factory-recommended service procedures. You'll find your GM Diesel Maintenance Manuals contain step-by-step instructions . . . clearly written, extensively illustrated. You'll find, too, that wherever required, Kent-Moore "Rate-Maker" Special Service Tools have been developed to give you the means of duplicating factory-assembled conditions in the field. For you see, Kent-Moore Tools are designed in cooperation with your engine manufacturer to perform essential maintenance operations for which no adequate standard tools exist. And they're built to do these jobs better, faster, easier . . . without danger of damaging parts . . . and at lower cost than is possible by means of improvised, makeshift methods. So whether you service your own GM Diesels or have them serviced by others, *make sure the job's done right* . . . with Kent-Moore "Rate-Maker" Special Service Tools!

UPON REQUEST 48-page GM Diesel Service Tool Manual containing complete information on all the Kent-Moore Special Tools required to perform factory-recommended service on GM Series 51, 71, and 110 engines, as used in GMC Trucks and Coaches, Euclid Road Machinery vehicles, as well as in numerous other applications. It's yours for the asking without obligation. Write for your FREE copy today!



KENT-MOORE ORGANIZATION, INC.

Executive Offices: 3-105 General Motors Building • Detroit 2, Michigan
Factories & Research Division: Jackson, Michigan

ENGINEERS AND MANUFACTURERS OF SPECIAL AUTOMOTIVE SERVICE TOOLS AND EQUIPMENT

AMONG THE STATES

New laws and regulations adopted by the various states recently include:

Alabama: Tractor semi-trailer combination length is increased to 50 ft; single axle limit is set at 18,000 lb with 10 per cent margin of error for enforcement purposes; bridge formula is replaced with AASHO table of axle spacing for determining GVW (H110).

California: Exemption from length limits is extended to timbers or integral structural material not exceeding 80 ft in length (H3042). Lights or devices required by Vehicle Code are permitted to extend 10 in. on each side if maximum width is not over 120 in.; door handles, hinges, cable clinchers and chain binders are permitted to extend 2 in. on each side if maximum width does not exceed 100 in. (H3077). Written certificate of self-insurer is authorized as proof of financial responsibility (H3603). For purposes of transportation license tax exemptions, the term "city limits" has been further defined (H1217). Penalties have been prescribed for failure to pay use fuel tax (H1330). Excludes certain amounts from transportation license tax relating to passenger transport. Trucks used exclusively in not-for-hire passenger transport are exempt from commercial vehicle weight fees (S1993). Speed limit for trucks or combinations of 25,000 lb or more GVW are increased to 45 mph maximum (H192). Construction or installation of front bumper more than 2 ft beyond foremost part of body is prohibited; measurement of forward projecting load is to be made from foremost part of tires (H1778). New type sealed-beam headlamps are approved (H2211).

Connecticut: Regulation of household goods carriers is provided (S1140). A highway financing study commission is appointed to report its findings and recommendations to the Governor on or before the 1957 legislative session (S3X). Installation of air conditioning equipment in vehicles is regulated (H693). Two laws have been passed affecting use of radio telephones in vehicles (S1349 and (TURN TO PAGE 184, PLEASE)

OPERATION"-BUT ★ ★ ★ ★ ★ ★ ★ ★

BATTERIES BACK IT UP! ★ ★ ★ ★

NEW! CONVENIENT! DELCO ELECTROLYTE PACKAGE

Many fleet owners prefer Delco Dry Charge Batteries because they can be stored indefinitely and activated immediately with no electrical charge. You just add electrolyte from Delco's new disposable container and your vehicles are ready to go. No time is lost, and there's no problem to storing or handling electrolyte with Delco's convenient container.



ZIP



ZIP off the top of the sturdy fibreboard container, with the built-in pull string.

CLIP



CLIP off the corner of the acid-proof polyethylene bag that's permanently attached to the container.

POUR



POUR easily from this disposable container, which comes in two sizes to meet every battery need.

Among the States

Continued from Page 180

S1350). Public liability and property damage insurance requirements for public service motor vehicles have been amended (S938).

Delaware: Amounts required under financial responsibility law are increased to \$10/20/5000 (S266).

Florida: Manufacture and transport of explosives is regulated (H140).

Uniform Vehicle Code requirements for multiple-beam road lighting equipment have been adopted (S1123).

Illinois: Length limit for combinations is increased to 50 ft (H502). Registration fee for 4-wheel or more trucks and buses between 20,000 and 24,000 lb is fixed at \$251 (H763). In-transit trucks may draw two other in-transit trucks by dual saddlemount method (H509). Regulation of property transport for-hire is amended (S619 and S622). Common and contract vehicles must carry operating

authority certificate in cab of power unit at all times (S685). Certain townships are eligible for motor fuel tax revenue allotment if they have levied special road taxes (S767). Vehicles transporting flammables are required to be marked with the word "inflammable" in letters not less than 3 in. high and in reflectorized paint (H168). Bus and truck rear fender splash guard specifications are provided (H787).

Massachusetts: Dept. of Corporations and Taxation is directed to make a study relative to taxation and use of special fuels (S814).

Missouri: In St. Louis, it is unlawful to operate diesel-powered vehicles unless equipped to discharge exhaust into air above the normal traffic.

New Hampshire: Breakaway safety chains are required on trailers and semi-trailer combinations (H363). Tractor semi-trailer combinations with three axles with a distance of not less than 25 ft between extreme axles are permitted 50,000 lb GVW; in measuring axle spacing, distances of six inches or less are to be rounded off to the lower even foot (S131).

Ohio: One axle (or tandem axles under 8 ft. apart) is permitted to have a 1000-lb overload if adjacent axle, other than front axle of vehicle, is under limit by an equal amount.

Wisconsin: Milwaukee has passed an ordinance relating to vehicle mufflers and the prevention of excessive or unusual noises and exhaust gases. Vehicles hauling unmanufactured forest products are allowed a 21,000-lb axle weight and a 11,000-lb wheel weight (H427). Farm trucks over 10,000 lb GVW are authorized to register at one-fourth of regular truck fees (H557). Intrastate operation by a Wisconsin resident of a vehicle owned by person from a state with which Wisconsin has a reciprocity agreement is permitted (H425). Annual fee for permit for leased trailers is fixed at \$10 (S234). Reciprocity in regard to registration fees will be revoked in cases involving overweight vehicles (H519). New law affects reciprocal privileges for non-residents (S241). A new section of Statutes (Sec. 194.04(3)(C)) has been created relating to leasing of vehicles to common and contract carriers (H639). Modification of the muffler to permit noise louder than that emitted originally by the muffler is prohibited (H286).



Mileage — you add it with Michigan Hi Therm Engine Bearings — best for replacement. You add miles of satisfaction — you stay miles away from arguments and make-good jobs. You're miles ahead with faster, more accurate installations.



SPECIFY MICHIGAN HI THERM
Made to the same original equipment specifications as the bearings we supply to leading car and truck manufacturers.

**DETROIT ALUMINUM &
BRASS CORPORATION**

DETROIT 11, MICHIGAN

michigan
Hi-Therm
engine bearings



if the
TRUCK DEALER
built the
trucks he sells—



ZENITH

CARBURETORS

would be *his* choice

The successful truck dealer is in the business of selling customer satisfaction as well as retailing trucks.

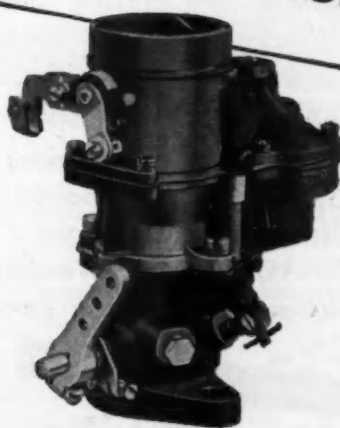
For it is obvious that unless a dealer enjoys a substantial volume of repeat business he is going to have trouble operating at a profit.

Therefore, shrewd truck dealers are vitally interested in the performance of such important components as carburetors. It is for this reason that the outstanding performance characteristics of Zenith* Carburetors, under every operating condition, have made Zenith the dealer's choice.

Therefore, it just seems reasonable that if truck dealers were engineering trucks for complete customer satisfaction, performance proven Zenith Carburetors would be their choice for standard equipment.

Further evidence why—if you build, buy, sell or operate trucks, Zenith should be your choice for the finest in carburetion.

*REG. U. S. PAT. OFF.



ZENITH CARBURETOR DIVISION OF

Bendix
AVIATION CORPORATION

696 Hart Avenue • Detroit 14, Michigan • Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N. Y.

COMMERCIAL CAR JOURNAL, September, 1955

Do Road Calls Measure PM Efficiency?

Continued from Page 71

department are interested in the failures directly attributable to neglect on the part of the maintenance department—and that means chargeable road calls.

Road Failure Factors

In making comparisons of such

questions—as for example relative efficiency of maintenance of equipment of two or more companies, there may be several factors which affect this cost, as follows:

Age of equipment is certainly an important factor. We all know that practically all mechanical appli-

ances as they grow older tend to break down more frequently.

The type of equipment may also have a decisive effect on the number of road calls. Some manufacturers pride themselves on building a rugged vehicle.

Others may specialize in a light vehicle with a high gas mileage. The former will make the much better showing as to road calls in the heavy service above described—the latter a very poor record.

The quality of inspection also affects the number of road calls.

The character of the service—grades, turns, frequency of stops, tightness of schedules, traffic congestion—all have their effect on road calls. A bus operating on a light run on open road with comparatively level grades, few stops and an easy schedule may give weeks, perhaps months, of "road call free" service. This same vehicle on a hilly line in congested traffic and a tight schedule may be continually in trouble.

The grades over which a bus operates have a very decided effect on the number of road calls. The force required to maintain a speed of say 25 mi. per hour on a level road will amount to about 40 lb per ton; on a 10 per cent grade, it is about 240 lb—six times as great. In other words, there is six times the strain on the engine and driving mechanism of a bus on a 10 per cent grade than there is on a level road.

Frequency of stops is another factor similar to grades in their effect on breakdowns. It requires several times the power to accelerate a bus as it does to maintain a speed of say 25 mi. per hour.

Here's the Problem

To anyone who has made a careful comparison of road calls on different operations, it is apparent that there is a greater variation in this item than in any other yardstick commonly used in measuring maintenance efficiency. Variation in these other items may amount to 20, 30, or even 50 per cent, but the number of road calls per 100,000 miles varies as much as 500 per cent, or even more.

END

Please Resume Reading Page 72

BRADEN WINCHES



Another Job Made *EASIER* with a BRADEN Winch

Every week we hear of new ways BRADEN owners are putting their BRADEN Truck Winches to work. BRADEN'S ruggedness, safety and dependability, make them economical on any handling job.

BRADEN Winch sizes are available from 3,000 to 100,000 pound capacity models, to fit any make of truck. Be Safe . . . use BRADEN Truck Winches.

BRADEN WINCHES ARE IN SERVICE AROUND THE WORLD

Write for Complete Catalog

BRADEN WINCH COMPANY

P. O. Box 547, Broken Arrow, Oklahoma



Alcoa A

3
more



10 U

Concrete Del
Aluminum ta
what happened

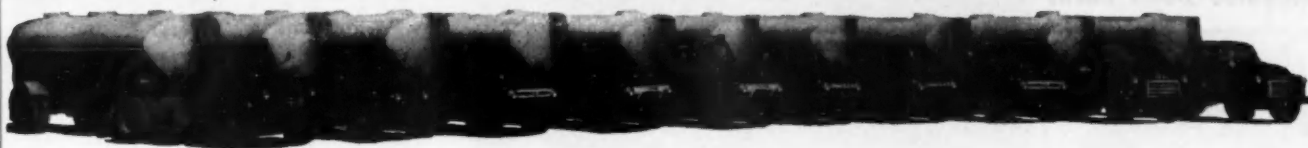
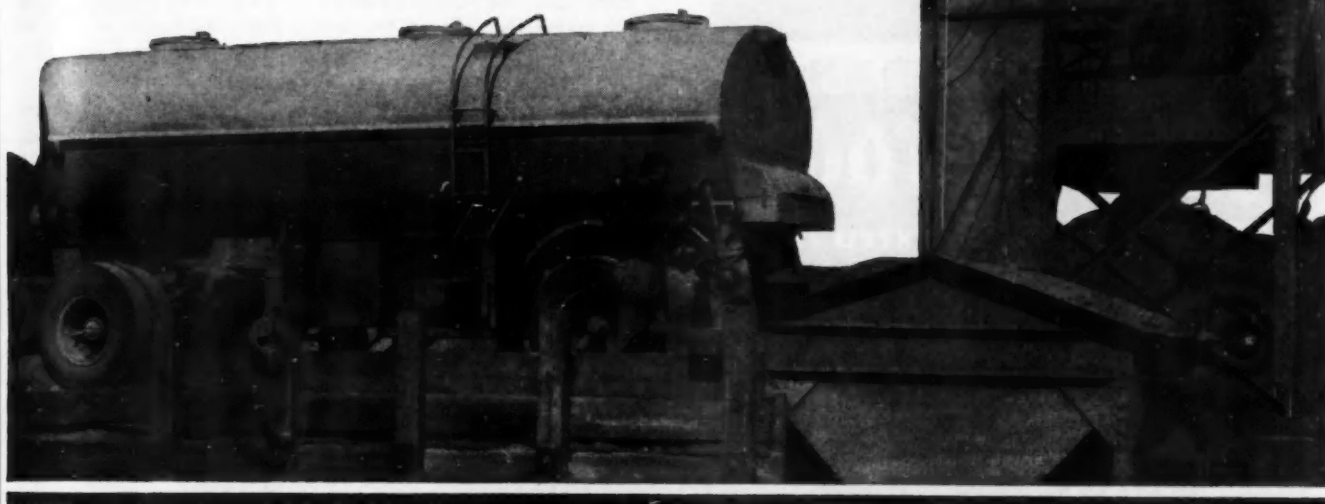
Each of the
trip—\$10.80 m
earnings run
size in one year

No wonder
of cargoes, are
Aluminum to
for yourself h
profits. Write
shows how rep
pay off for you
1876-J Alcoa l

COMMERCIAL CAR

Alcoa Aluminum adds payload —

3,760 pounds
more cement per trailer...



10 units boost yearly earnings \$27,000!

Concrete Delivery Co., Inc., of Buffalo specified Alcoa® Aluminum tank-type trailers instead of steel units. Look what happened!

Each of their ten aluminum rigs earns \$5.40 more every trip—\$10.80 more every day! Simple arithmetic shows fleet earnings run \$27,000 ahead of steel vehicles of the same size in one year, or 250 working days.

No wonder that progressive truckers, handling all types of cargoes, are using truck bodies and trailers made of Alcoa Aluminum to boost net income and cut upkeep costs. See for yourself how aluminum equipment can improve your profits. Write for the new Weight-Rate-Profit Chart that shows how replacing costly weight with paying freight can pay off for you. Address: Aluminum Company of America, 1876-J Alcoa Building, Pittsburgh 19, Pennsylvania.



Concrete Delivery's units were furnished by Fruehauf Trailer Co., using shell, head, bulkhead and framing of Alcoa high-strength aluminum welding alloys with inert gas welded construction, to achieve high strength and greater ductility.

Your Guide
to Aluminum
Value





Dragline System Cuts Loading Time in Half

EASTERN Motor Express's solution to maximum efficiency on four of its terminal docks is an endless chain, floor-type dragline operation powered by 7½-hp electric motors which move strings of carts about the terminal dock. The carts, attached to the chain track at intervals, are dispatched to inbound pick-up trucks on the unloading side of the dock. Here the carts are loaded for specific destination, and then moved along to the loading side.

Trucks and trailers are stationed on the loading side under signs indicating various destination points. A square blackboard on each cart denotes the stations or destination points, the number of pieces on the cart, and the total number of pieces in the shipment.

Bill Moves With Freight

As an example, the number "32" above "3 on 7" means that the freight on the cart is three pieces of a seven-piece shipment to be unloaded off the cart at loading bay 32 to be placed with, or wait for, the other four pieces in the shipment. Holding the bill on the front end of the cart is a small cylinder. The bill is placed on the first cart load of each individual shipment, then removed when it reaches the loading vehicle.

The entire operation is considerably free of noise, even when the dock is stacked full with freight. Curtailment of this tension-making noise permits the men on the dock to perform their work more efficiently and more conveniently.

Speeds Loading & Dispatch

Eastern Motor Express indicates that this all has contributed considerably to decreasing the loading time about 50 per cent, and has bolstered the dispatch speed approximately 35 per cent.

A room, known as the code room, is the nerve center of the dispatch system at Eastern Motor Express's terminals. This particular room houses a series of pneumatic tubes to convey transfer bills to and from various points in the terminal structure. Here bills are made up in one packet for each vehicle, and moved on to the proper loading bay.

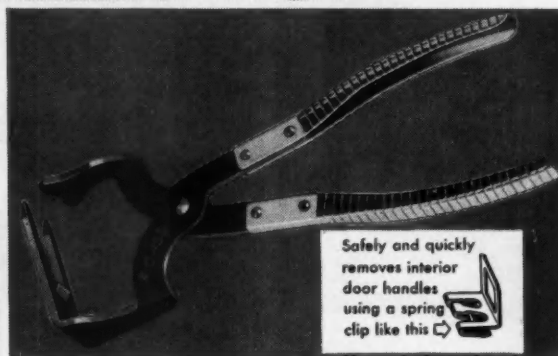
An electronic communications system with a portable speaker in each company trailer helps bring closer coordination and cooperation between the dispatcher and the loader.



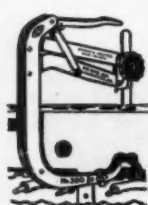
K-D 435
Removes door handles on all 1955 Chrysler-built cars.



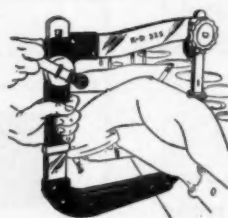
You can't pry these handles off! You must release the spring clip from a groove in the shaft first. K-D 435 is SPECIALLY DESIGNED to do the job quick, easy, fast without any possible upholstery damage. Will also remove interior door trim panels. All steel, rust-proofed. NOTE: Will also work on Chrysler Imperial; can be used on 1955 Packard.



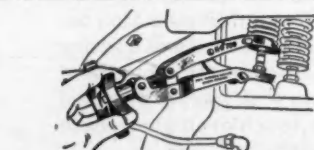
Safely and quickly removes interior door handles using a spring clip like this.



K-D 380 Valve Spring Compressor. For L-heads, valve-in-heads old or new. Most popular tool of its kind in the USA. Also for many tractor, truck, bus engines.



K-D 325 Heavy Duty Compressor. For BIG truck, bus, tractor engines, L-head and overhead. Deep throated, rugged.



K-D 700 Valve Spring Lifter. Just right for deep set L-heads (Ford 6 incl.). Easy turning handwheel. Adjustable jaws. Automatic locking any height. 8" long.

FREE CATALOG. Over 100 K-D Tools from pliers to valve tools.



K-D MFG. CO., LANCASTER, PA.



K-D Tools are designed and proven by shop men like yourself, to be a real "pair of extra hands". Use them to make hard jobs easy and profitable.

LIGHTER

and STRONGER!



Where payload decides the profit, lighter, stronger TDA Trailer Axles can be a vital asset to truckers.

Proved far stronger, more rugged and safer in all-out "Torture Chamber" tests, TDA Trailer Axles are also *many pounds lighter* than any competing axle on the market today. Weight saving is possible through the TDA exclusive design and construction.

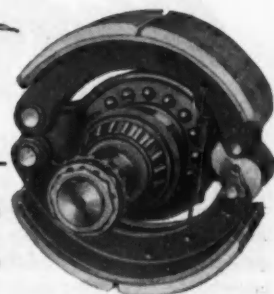
Other hidden quality features that increase TDA life and performance are forged alloy steel spindles, cam roller mountings in nylon bushings, machined cam head, cleaner cut splines and self-aligning camshaft support brackets. Good reasons leading manufacturers and operators specify TDA.



Here, in the world's largest trailer axle plant at Kenton, Ohio, are built the finest trailer axles in the world. Continual laboratory and high-

way testing prove TDA Trailer Axles to be the lightest and strongest; and for greater safety on the highway—less maintenance and more pay load—make certain you specify Timken-Detroit "Quality-Built" Truck-Trailer Axles on your next trailer purchase.

These Exclusive Advantages of TDA Trailer Brakes Are Examples of Timken-Detroit Hidden Quality!



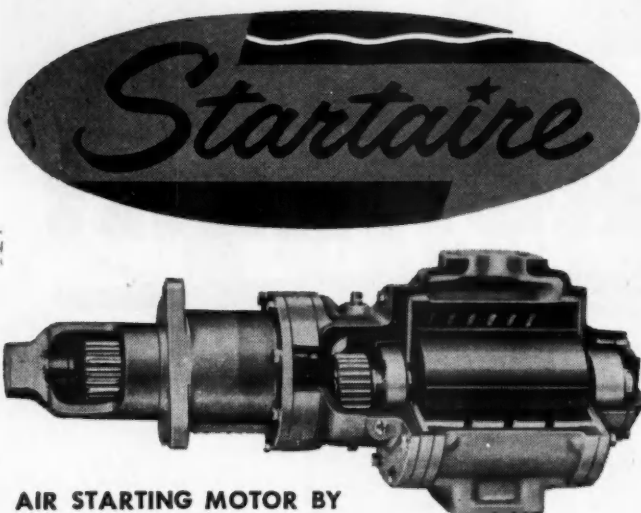
Pressed Steel Brake Shoes that save many pounds per axle . . . give strong braking action with no distortion. Patented liner shape gives longer liner life with even wear. Liners riveted on . . . no chance of movement on shoe . . . and liners are circle-ground to insure absolute concentricity of liners and drums. Rustproofed anchor pins locked in. Exclusive self-aligning camshaft housings. Cam rollers heat-treated to roll smoother, wear longer. First with all-nylon camshaft bushings. Part for part TDA Brakes incorporate the finest quality materials, skilled workmanship and advanced design.



©1955 RS & A Company

NOW FOR YOUR HEAVY-DUTY ENGINES

**Fast-action, trouble-free
starting at any temperature!**



AIR STARTING MOTOR BY

**Bendix-
Westinghouse**

Now you can banish starting problems so often encountered under adverse weather conditions with gasoline and diesel engines—eliminate the need for heavy-duty batteries, oversized generators, switches and cables. With new Startaire you get, instead, the dependability and economy of powerful compressed air engine cranking—*immune to cold and heat*—that assures you of fast-action, trouble-free starting. Startaire air starting motors, of rotary multi-vane design, are equipped with a friction clutch and housing and come to you in ready-to-install units which are easily interchangeable with electrical starting motors. See your Authorized Bendix-Westinghouse Distributor.

Write for complete
information



- Assures Quicker Starts
- Reduces Electrical Maintenance
- Eliminates Need for Extra Batteries, Large Generators
- Reduces Total Vehicle Weight
- Requires Less Space
- Assures Safe, Explosion-Proof Cranking
- Is Immune to Cold and Heat

Bendix-Westinghouse

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY

General Offices and Factory—Elyria, Ohio • Branches—Berkeley, Calif.; Oklahoma City, Okla.



Wilkes-Barre Wars on Gas Hogs

Continued from Page 7a

was aimed at the mufflers. It was found that the "store bought" mufflers were plugging up sometimes within a two-month period to the extent that combustion efficiency was upset. The small pin holes in the inlet and outlet pipes were quickly choking up so that resulting heat was burning out both the shell and the pipes.

Redesigned Mufflers

The shop set about to redesign the mufflers and a complete replacement program was initiated. The new design utilizes the old shell and inlet and outlet pipes where they are salvageable. The baffle and ends are discarded. Every other hole in the pipes is drilled out to $\frac{3}{8}$ in.—or new pipes are drilled to this specification. New end plates are cut out and the pipes are welded to the plates. Ends are installed so that the pipes align, there being 5 in. of clearance between the ends.

The new design has been in use for a period of two years, and to date not one has blown or coked up. The exhaust noise level is no higher than with the original design, and back pressures are cut to a minimum. In addition the company has found an appreciable drop in valve troubles caused from burning as a result of the restricted exhaust line.

Adjustment Program

Not content with this, Wilkes-Barre sent the entire fleet through an extensive tune up and adjustment program that had as its objective the nailing down of other factors contributing to poor fuel economy. Emphasis was placed on spark plugs, spark adjustment, ignition reconditioning and carburetor replacement or adjustment. Mechanics were instructed to take special pains to locate possible wear or maladjustment and every available instrument was put at their disposal. Result of this program was a general raise in miles per gallon from 3.5 to 3.75.

Today the fleet gets an inspection and service every 2500 miles. It is found that potential troubles can be caught before major wear or excessive numbers of road failures occur with the PM set up in this manner.

Diesel Conversion

The next and latest step in the economy drive was a swing to the Leyland diesel. Wilkes-Barre is operating 41 3-36's (ACF Brill) which will lend themselves to the diesel conversion. The pilot job is complete and another is scheduled immediately. If anticipated savings work out as expected the entire series may be converted. Fuel mileage increase to 6 miles per gallon is expected with this equipment. This plus the added savings of lower cost of diesel fuel is expected to write off the cost of the modification within a three-year period.

The first conversion was made with about 403 hours of labor. It is estimated, however, that with the

experience gained, approximately 300 hours of labor, but the diesel at a cost of \$3.50 with figures made the cost

Storage Fuel

Big savings in the fine storage of the material. The cost of 9 separate partitions is 146 cents per partition. The rear for each condition comparison extra money the stalls in by reduced tire fleet wear.

Steam heating cell and exhaust throughout the deg F through is required of heat only bus per year cost of \$3.50.

Why Inside

While some age due to Barre feels these reasons

1. Engine saving fuel obviously due to efficiently. son. As a 6000-mile deposit form

2. An apptors who earlier in frosted win here that it engine to t weather and

3. Engine tion of bea times.

4. Improv factor which Drivers get and satisfie warm coach

that the
metimes
at com-
holes in
ng up so
the shell

rs and a
The new
tlet pipes
ends are
rilled out
specifica-
pipes are
that the
between

od of two
oked up
with the
to a mini-
an appre-
turning us

the entire
djustment
ling down
economy.
rk adjust-
or replace
structed to
maladjust-
ut at their
neral raise

ervice every
oles can be
umbers of
is manner.

drive wa
re is oper-
lend them
job is com-
ely. If as
the entire
increase in
equipment
st of diesel
ne modifica-

at 403 hours
t with the

ptember, 1955

experience gained the next job will be cut to approximately 300 hours. Costs again will vary with the labor, but the company hopes to make the change to diesel at a cost of \$575 per vehicle. This is in line with figures expressed by other properties who have made the conversion.

Storage Facilities

Big saving, however, for Wilkes-Barre comes from the fine storage facilities built on the property adjacent the maintenance shop. This housing unit consists of 9 separate stalls, each holding 8 coaches. The building is 146 ft wide by 223 ft in length, has full height partitions between stalls and separate doors front and rear for each unit. The entire structure is fire-proof, a condition built into the structure after a careful comparison of costs and hazards. It was felt that the extra money spent in fireproofing and individualizing the stalls in this manner would be eventually offset by reduced insurance and the assurance that the entire fleet would not be in constant danger.

Steam heaters are set in the upper structure of each cell and electric fans distribute the heat evenly throughout the areas. Temperatures are kept at 60 deg F throughout the winter months. Thus heating is required about seven months out of the year. Costs of heat only run approximately \$3,800 or \$52.75 per bus per year. The building was erected in 1951 at a cost of \$3.50 per sq ft.

Why Inside Storage

While some properties may not require inside storage due to location in a more clement area, Wilkes-Barre feels that inside storage of coaches pays off for these reasons:

1. Engine idling during warm up is eliminated—saving fuel in a higher proportion than outlined previously due to the fact that cold engines burn fuel less efficiently. There is less oil dilution for the same reason. As a result, oil changes can be stretched out to a 6000-mile period without danger of damage from deposit formation or dilution.

2. An appreciable amount of time is saved by operators who normally would have to start 15 minutes earlier in order to warm up the engine and scrape frosted windshields and mirrors. It should be stated here that it is often impossible to warm up a heavy engine to the proper operating temperature in zero weather and while the coach is in operation.

3. Engine wear is reduced since adequate lubrication of bearings and cylinder walls is assured at all times.

4. Improved public and employee relations is a factor which cannot be overlooked in this program. Drivers getting into a warm bus are more courteous and satisfied with their jobs. Riders, too, appreciate warm coach interiors.

END

Please Resume Reading Page 74

COMMERCIAL CAR JOURNAL, September, 1955



Thermatic[®] Fan Drive

FOR YOUR HEAVY-DUTY ENGINES

One sure way to improve the all-round performance and efficiency of your heavy-duty engine is to install a new Bendix-Westinghouse air operated Thermatic Fan Drive. The Thermatic Fan Drive System keeps constant track of engine coolant temperature and either engages the engine fan when more cooling is required or disengages it when engine coolant temperature falls below the desired operating temperature. As the engine fan is disengaged much of the time, more engine horsepower is delivered and greater fuel mileage is realized. Then, too, you can be sure of faster engine warm-ups, better interior heating system performance and increased engine life. They are available in kits for field installation. See your Authorized Bendix-Westinghouse Distributor.

Write for complete
information



- Fuel Savings
- Increased Horsepower Output
- Quicker Warm-up
- Less Sludging in Lube Oil
- Saving in Engine Wear and Maintenance
- Increased Heating System Efficiency

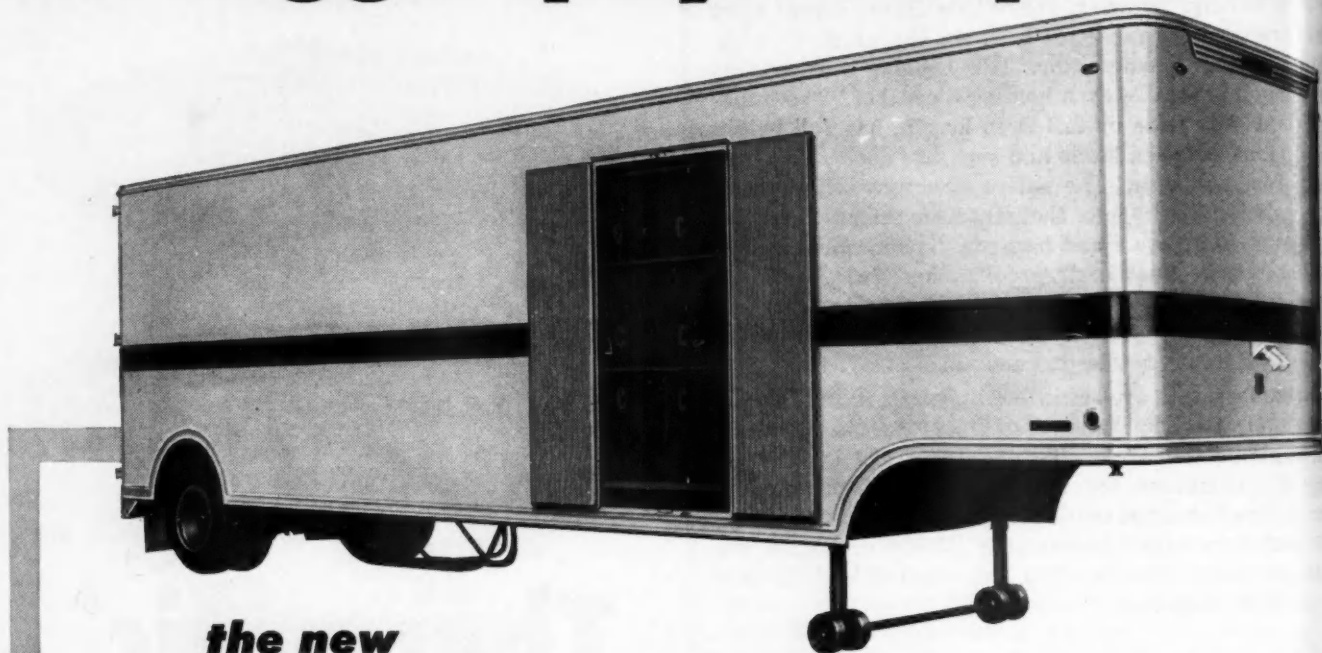
Bendix-Westinghouse

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY

General Offices and Factory—Elyria, Ohio • Branches—Berkeley, Calif.; Oklahoma City, Okla.



WIDE OPEN for bigger payload profit!



**the new
HIGHWAY WAREHOUSEMAN'S VAN
has 10% more cubage!**

Highway's wider and higher drop-frame Warehouseman's Van has the maximum cubage and rugged construction needed to haul bulky loads faster and safer. There's a new look in the squared front and semi-flat roof — and it means more room inside!

Body and frame are an integral unit, and Highway's famous "stress panel" construction takes the toughest trips in stride — there's not a pound of extra weight. This water-tight, dust-and-moistureproof van is built for rock-bottom maintenance. Compare it with any other van on the market. And remember, the *new* Highway Warehouseman's Van means bigger hauling profits for you because it's built to pay!

*Keep Your Eye on the Highway
You Won't Find a Finer Trailer — ANYWHERE!*



HIGHWAY TRAILER COMPANY
HEADQUARTERS: EDGERTON, WISCONSIN

Manufacturers of

Commercial Trailers • Trailerized Tanks and Dry Bulk Haulers • Public Utility Bodies • Earth Boring Machines • Pole and Cable Reel Trailers • Winches • Power Take-offs • Service Accessories

SALES AND SERVICE IN PRINCIPAL CITIES

Here's
When
needs a
him th
old eng
manuf
tested

Have
credit f
from y
your lo
remanu



Gene Wice, who operates the Pitt Motor Exchange in Pittsburgh, Pa., is shown here installing a top-quality remanufactured engine equipped with Johnson Bearings.

How to make up to \$125 per day in one stall!

Here's all you do:

When you get a prospect who needs a *complete* service job, sell him the idea of exchanging his old engine for a guaranteed, remanufactured, dynamometer tested engine.

Have your prospect fill out a credit form which you can obtain from your engine supplier. Call your local distributor or jobber of remanufactured engines, give him

the credit information over the phone and your estimate of the amount to be financed—you can include accessories plus previous back bills the prospect owes you.

You invest nothing, take no chances, because the loan is strictly between the finance company and the car owner at *no cost to you*. Your customer goes to the finance company by *himself* to sign the papers.

You get your money with a sure profit, usually before the work is completed.

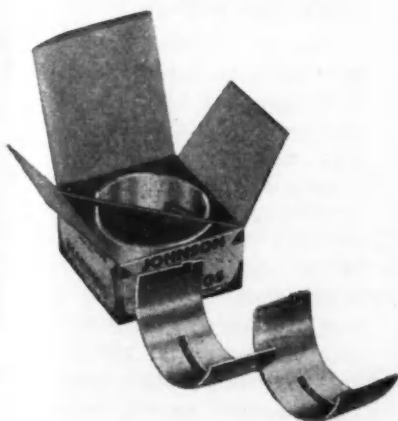
The engine remanufacturer guarantees his engine against defects in material and workmanship, the same as a new car manufacturer, because he uses the same high quality parts like *Johnson Bearings* for mains, rods and cams

that were used *originally* by the car maker.

That's why it pays to install remanufactured engines—you increase your profits, eliminate headaches and your customer is happy.

Johnson has been an important supplier of engine bearings to the automotive industry for many years—works closely with design, production, and metallurgical engineers to help solve the many problems of producing bearings that will give even better service in the miracle engines of tomorrow.

Remember, Johnson jobbers stock complete sets of engine and automatic transmission bearings for most makes of cars and trucks. Try Johnson next time you need replacement bearings.



Johnson Bearings

Johnson Bronze Company
640 S. MILL STREET • NEW CASTLE, PA.

September News Roundup

Continued from page 102

tester is used for making sure "Zerex" doesn't turn acid during the first season's use, let's set the record straight. This analyzer is used to test the anti-freeze *after* a season's use. A check will show which has ample reserve alkalinity so that it can be *re-used*, thus saving up to 50 per cent of your anti-freeze costs.

Ohio Axle-Mile Tax

Axle-mile tax in Ohio is snarled-up in the middle of an adverse court decision and the re-negotiation of Ohio reciprocity pacts. It started when Ohio's Supreme Court held that Michigan trucks operating in Ohio were exempt from the axle-mile tax. The court based its decision on the 1937 reciprocity pact between Ohio and Michigan. Ohio Governor Lausche immediately ordered all reciprocity pacts be rewritten to permit collection of the axle-mile tax. As of the middle of last month, three states had signed the new agreements, with about 18 yet to be heard from.

Ohio's Attorney General will appeal the decision when the state's Supreme Court convenes later this month. Also it was rumored that Ohio truck operators were planning to attack the constitutionality of the tax in the light of the court's decision exempting Michigan trucks. Basis of the

Truck-Mounted Flashers



This Douglas Aircraft diesel rig of the El Segundo Division in California illustrates the application of a self-contained battery-operated flasher warning light mounted permanently in the rear apron of each truck and trailer. The warning lights are manufactured by the Neo-Flasher Mfg. Co., Burbank, Cal. The flashing red light which operates independently of truck battery or electrical system. In the case of truck battery or other electrical failure, the flasher lights may be switched on manually by the driver to warn on-coming traffic. This permanent mounting of the flasher permits parking of trailer with the light flashing, even if the tractor is completely removed.

case would be that such exemption discriminates against Ohio truck operators.

Safety Congress

Over 12,000 safety people are expected to hear some 600 safety specialists during 200 scheduled events during next month's (Oct. 17-21) National Safety Congress and Exposition in Chicago. In addition to the regular sessions of the Commercial Vehicle and Local Transit sections, fleet safety men will find many an interesting idea in the 256 exhibits of all types of accident prevention equipment.

1955 Truck Trailer Shipments*

	June	Six Months
Vans:		
Insulated and Refrigerated:		
Steel.....	86	665
Aluminum.....	471	2,027
Furniture:		
Steel.....	147	986
Aluminum.....	18	101
All other closed-top vans:		
Steel.....	1,062	4,397
Aluminum.....	1,908	10,742
Open-top:		
Steel.....	219	816
Aluminum.....	215	1,078
Total—Value.....	4,127	20,812
Tanks:		
Petroleum.....	432	2,138
All other.....	63	321
Total—Tanks.....	495	2,459
Pole, Pipe and Logging:		
Single Axle.....	91	385
Tandem Axle.....	156	746
Total.....	247	1,131
Platforms:		
Racks, livestock and stake.....	100	590
Grain bodies.....	80	447
Platforms (Rats), all types.....	791	3,546
Total—Platform.....	971	4,583
Low-bed heavy haulers.....	292	1,542
Dump trailers.....	216	944
All other trailers.....	314	2,097
Total—Complete Trailers.....	8,662	33,568
Chassis only.....	286	1,721
Total—Trailers and Chassis.....	8,948	35,289

* Industry Division, Bureau of the Census.

Tri-State Roadoo

The first tri-state truck Roadoo in the history of the trucking industry was held early this month in Camden, N. J. The 73 contestants represented truck fleets from Pennsylvania, New Jersey and Delaware. The champions in each class from each state go to Washington, D. C., next month to compete in ATA's National Truck Roadoo.

Driver Wins '55 Model



Donald J. Feenstra, city delivery driver at Grand Rapids, Mich., was awarded a new, 1955 model car as the result of a safe driving contest held by Holland Motor Express, Inc., Holland, Mich. The program which culminated in the awarding of this new car was the result of a year-long contest in which 148 highway and city drivers were originally eligible to participate. At the start each of the drivers had twelve chances on the prizes. Penalties resulting in the loss of these chances were inflicted for accidents and poor operating practices. At the end of the year, the names of all qualified drivers were placed in a pool, and at a recent drivers' meeting, Mr. J. Dwight Nash, Safety Inspector, Interstate Commerce Commission, drew the name of the fortunate driver. Seven gold wrist watches suitably inscribed were also presented to drivers at this meeting.

New Mexico Assn.

New address of the New Mexico Motor Carriers Assn. is 500 Second St., N.W., Albuquerque, N. M. Mail should be addressed to P. O. Box 541.

North Carolina

North Carolina Motor Carriers Assn. members made available truck safety patrol cars and trucks for hurricane Connie civil defense emergency use, reports J. T. Outlaw, NCMCA executive vice president.

Highways in Peru

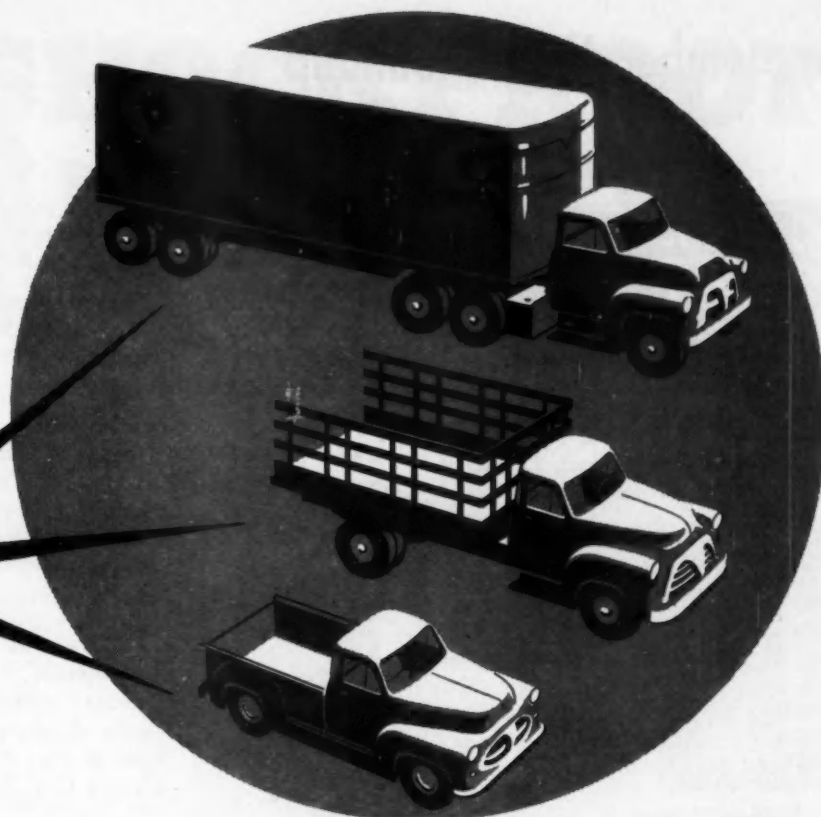
The International Bank has loaned \$5 million to Peru to help carry out a program of highway maintenance and train personnel in modern highway maintenance methods. Peru is largely dependent on roads as a means of transport and the highway system provides the only link between some of the main regions of the country. While some freight is moved by coastal ships, and many mineral products are carried to port by rail, the bulk of Peru's freight traffic—including her chief export, cotton—moves by truck over the highways.

(TURN TO PAGE 236, PLEASE)

**BETTER
TIRE
PERFORMANCE
FOR ALL**



FROM



DUNLOP HIGHWAY TRUCK TIRES

TUBELESS OR TUBED

WITH EXCLUSIVE TENSION-FREE CONSTRUCTION

HERE'S WHY TENSION-FREE CONSTRUCTION MEANS LONGER TIRE LIFE



In ordinary truck tires, tension points in sidewall and shoulder areas are a result of concentrated flexing stresses. These cause internal tensions that create excessive heat, result in dangerous cord fatigue. Tread wear suffers too; internal tensions cause uneven load distribution, result in accelerated, uneven tread wear.



Dunlop Super Gold Cup Highway Truck Tires are engineered to anticipate stresses, not be distorted by them. Flexing stresses are distributed equally throughout the tire body. There are no critical tension points. Internal heat is minimized, loads are evenly distributed over the tread area. The tire rolls cooler, longer with greater resistance to blow-outs and other tire failures.

If you buy total ton miles, buy Dunlop Super Gold Cup Highway Truck Tires . . . get up to 34% more mileage on the original tread plus the highest recap recovery on record.

Exclusive Dunlop manufacturing techniques produce tires that provide maximum moisture and bruise resistance—freedom from growth problems—and freedom from channel cracking.

The entire line of Dunlop Super Gold Cup Truck Tires is engineered to give you maximum mileage and dependability. Dunlop single bead tires for light trucks are built to the same high standards as their bigger dual bead brothers; are available in tubeless construction in popular sizes.

FINEST TRAKGRIP TIRES, TOO!

When the going's extra tough, smart operators install Dunlop Trakgrip Tires for heavy duty off-and-on-the-road service. These tires provide maximum traction plus famous Dunlop reliability and long life.

DUNLOP TIRE AND RUBBER CORPORATION

Factory and Executive Offices, Buffalo 5, New York

DUNLOP — FOUNDERS OF THE PNEUMATIC TIRE INDUSTRY

September News Roundup

Continued from Page 234



... Gordon G. Bullock, promoted to perishables superintendent, Pacific Inter-Mountain Express Co., Oakland, Cal.



... John H. Flaskamper, promoted to vice president - sales, American Division, American Bosch Arma Corp.

... William G. McKay, Jr., appointed director of safety and public relations, Roy L. Jones, Houston, Texas. He was Bell Transportation Co. safety director.

... James K. Mathies, appointed Area Two safety supervisor, Mason & Dixon Lines, Kingsport, Tenn.

... Wallace L. Pepin, promoted to service director, The White Motor Co., Cleveland, Ohio.



... Robert W. Tyson, Jr., appointed manager, Bus Division, Mack Motor Truck Corp., subsidiary of Mack Trucks, Inc., New York City. He was Mack distributor in White Plains and Poughkeepsie, N. Y.



... Edward D. Hicks, Jr., promoted to director, Field Service Dept., American Trucking Assns., Washington, D. C.

... George D. Cockcroft and John W. Deyo, promoted to coated abrasives sales managers in Atlanta, Ga., and High Point, N. C., branches respectively, Minnesota Mining & Mfg. Co., St. Paul, Minn.

... John M. Seanor, director of sales, Kent-Moore Organization, Detroit. He was with Stewart-Warner Corp.

... Arthur L. Boehm, appointed sales manager, Automotive-Industrial Division, The Black and Decker Mfg. Co., Towson, Md.

... Harold Yonkers and Homer C. Keck, promoted to assistant district managers in Fort Wayne, Ind., and Milwaukee, Wis., respectively, motor truck division, International Harvester Co., Chicago.



... Harold E. Pettegrew, appointed maintenance director, Riss & Co., Inc., Kansas City, Mo.

... William Webster, named acting manager, Chicago district, Service Division, Federal-Mogul Corp., Detroit.

... M. T. Sprague, promoted to district manager, Oakland, Cal., motor truck district, motor truck division, International Harvester Co., Chicago.

... Robert L. Abel, appointed radio and communications engineer, American Trucking Assns., Washington, D. C.



... Donald Levine, promoted to sales manager, Master Parts Division, Airtex Products, Inc., Fairfield, Ill.



... Ralph C. Hopkins, appointed sales manager, Utility Division, Highway Trailer Co., Edgerton, Wis.

... Victor E. Lane, promoted to district sales manager for Michigan and northern Ohio (Detroit), Pennsylvania Salt Mfg. Co., Philadelphia.

... Richard D. Tyler, appointed general sales manager, Overhead Door Corp., Hartford City, Ind. He was with General Electric Corp.



Southern-Plaza Express, St. Louis, Mo., has received approval from ICC Division 4 to purchase operating rights of English Freight Co., Dallas, Texas.

B & F Transportation, Washington, D. C., is receiving delivery on its order of 47 Trailmobile CID trailers. The order includes 17 full reefers, 20 tandem-axle, semi-insulated vans and 10 single-axle, semi-insulated vans.

Wallace Concrete Pipe Co., Columbia, S. C., won top award in the Motor Transportation Assn. of South Carolina's annual fleet safety contest, jointly sponsored by MTASC, American Trucking Assns. and Trailmobile. Other winners in the contest included: Hughes Transportation Co., Charleston; Huckabee Transport, Columbia; Rice Transfer & Storage, Rock Hill; and Cooper Motor Lines, Greenville.

Eastern Freightways, Pontiac, Mich., has purchased 40 GMC Model No. FM-661-50 tractors. They are equipped with 503 cu in., 225-hp engines and twin Hydra-Matic transmissions.

Foster Freight Lines, Indianapolis, Ind., has added 22 hi-cube trailers and 24 diesel-engine trucks to its fleet.

Central Truck Lines, Tampa, Fla., has received ICC approval of its purchase of Spanish Trail Transport, and is placing over 100 pieces of new equipment into service to serve the new area.

East Texas Motor Freight Lines has put into service 75 Andrews hi-cube trailers and lightweight aluminum vans.

Transcon Lines, Los Angeles, Cal., has purchased M & D Freight Lines, Dallas, Texas, subject to ICC approval.

Nashville Transit Co., Nashville, Tenn., winners of American Transit Assn.'s Silver Plaque for top achievement in passenger and traffic safety, also were awarded the Governor's safety award for 1954 and the 1954 award from the Tennessee Safety Council.

Republic Carloading and Distributing Co., Eugene, Ore., has awarded

(TURN TO PAGE 238, PLEASE)

MARQ
Welder en
ing curren
made of
rounds the
bilities of
short circu
free of noi
transform
metal cabi
rents cann
tive fibre g
Here are
"Perma-SI
losses are e
cy about 1
and the ca
rustproof,
colored . .
than steel,
Two size
amperes,
capacitor-e
tion.

MARQUETT
plete line of
electrodes and
New Ask y
Marquette's a
acetylene wel



New!

SHOCKPROOF NOISELESS WELDER!

MARQUETTE'S all new 90-Series A. C. Welder ends all exposure to dangerous welding currents. Its "Perma-Shield" Cabinet, made of *non-conductive fibre glass*, surrounds the welder unit, eliminating all possibilities of shock from improper wiring or short circuits. The welder is also completely free of noise. Cabinet vibrations, caused by transformer eddy currents which flow in metal cabinets, are eliminated as these currents cannot flow through the non-conductive fibre glass.

Here are more outstanding advantages of "Perma-Shield" construction: eddy current losses are ended, raising transformer efficiency about 10 per cent... operation is noiseless and the cabinet stays cool... fibre glass is rustproof, corrosion proof and permanently colored... and it is stronger and more rigid than steel, yet 4 times lighter in weight.

Two sizes are available. One delivers 200 amperes, the other 275; and each can be capacitor-equipped for power factor correction.

MARQUETTE also manufactures a complete line of AC and DC welders, welding electrodes and welding accessories.

New Ask your distributor to show you Marquette's all new line of "Jet" Series oxy-acetylene welding and cutting equipment.

Contact

your MARQUETTE distributor for a FREE demonstration... or write us for complete descriptive literature.



When It Comes to Welding Come to

MARQUETTE

WELDING EQUIPMENT — WELDING ELECTRODES
MARQUETTE MANUFACTURING COMPANY, INC.
307 E. Hennepin Avenue, Dept. 5-94, Minneapolis, Minnesota

SPEED WASH Outlasts 3 Ordinary Fountain Brushes



No. 240 Oblong

Designed for
larger trucks and
buses.



No. 250 Round
Ideal for small
trucks, passenger
cars.

NOT even three ordinary fountain brushes can match the long lasting performance that results from the superior construction and design of Speed Wash. Soft, resilient bristles (50% Nylon, 50% Select Horsehair) can't mat or tangle. Tufts are molded into block, can not come out or come loose. Steel back is waterproof and surrounded by a mar-proof bumper. Handle is zinc plated inside and out. Features like these make Speed Wash the quality brush of the trucking industry, preferred by thousands of the nation's biggest fleet operators. You'll like Speed Wash, too. Order yours today.

PRICES EITHER STYLE				
IN LOTS OF:				
Complete with 5 ft. handle	1	6	12	24
	\$12.45	\$11.65	\$10.90	\$10.15

MILWAUKEE DUSTLESS BRUSH CO.
530 North 22nd St., Milwaukee, Wis.

Please ship the following:

Quan.	No.	Item	Price
	240	OBLONG SPEEDWASH	
	250	ROUND SPEEDWASH	

NAME _____

ADDRESS _____

CITY _____

STATE _____

September News Roundup

Continued from Page 236

two undergraduates at the University of Oregon \$700 scholarships.

Hoover Motor Express, Nashville, Tenn., has just put into service 70 new diesel tractors and 80 new aluminum trailers. On order are 30 more diesel tractors and 40 more trailers. Also part of the fleet's \$2¼ million dollar expansion program are a modernized terminal in Chattanooga, Tenn., a \$50,000 freight conveyor in Nashville, and purchase of a 20-acre tract for a new terminal in Atlanta, Ga., now being built.

Hermann Forwarding Co., New Brunswick, N. J., plans mobile radio communication with its fleet within a 50-mile radius of the New Brunswick terminal. The fleet will have a 500-watt station on a 44.1 megacycle frequency with the call letters KEE-454.

Consolidated Freightways, Portland, Ore., reports 75 drivers in Spokane, Wash., have rolled-up a million miles without an accident, the fleet's Chicago drivers have two million periods without an accident to their credit, and drivers in Dickinson, N. D., are now working on their third consecutive million miles without an accident.



Fleets awarding their outstanding, safe drivers recently include:

Herr's Motor Express, Quarryville, Pa.—to 22 drivers. The awards, made at the fleet's seventh annual safety banquet, included six one-year (TURN TO PAGE 241, PLEASE)

BANK ON BLACKHAWK FOR HYDRAULIC JACKS

the leading line
... most complete!

BLACKHAWK MFG. CO
MILWAUKEE 1, WIS.

FOR SUPERIOR RESISTANCE to ABRASION and CORROSION

Specify
STRATOFLEX
FLEXIBLE
HOSE No 225

Built to give long service where conditions are especially rough on hose lines. Reinforced with high tensile strength wire braid with outer cover of tough synthetic rubber. In bulk hose or hose assemblies with Stratoflex "over the cover" detachable, re-usable fittings. Write for your FREE catalog or order through your dealer.

★ Hose
Assemblies
★ Re-usable
Hose
Fittings

Dealership Available
in Some Areas

STRATOFLEX

STRATOFLEX, INC. FORT WORTH, TEXAS
P. O. Box 10398

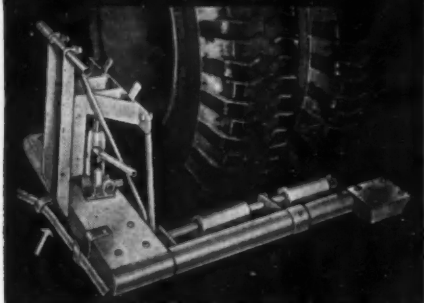
General Offices—P. O. Box 10398
Fort Worth, Texas

Branch Plants—Los Angeles and Toronto
Sales Offices—Atlanta, Chicago, Dayton,
Houston, Kansas City, Los Angeles, Portland,
New York, Toronto, Tulsa

**Cut Wheel-Changing
Labor Costs in Half!**

KEN E-Z LIFTING TRUCK WHEEL DOLLY

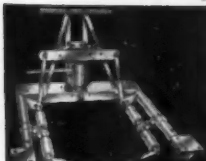
**CHANGES TRUCK WHEELS
FASTER - EASIER**



IMPROVED DESIGN No. T-105

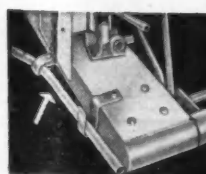
No more back-breaking wheel handling! Now one man can remove and replace single or dual truck wheels with this improved hydraulic lifting dolly. You get your trucks back on the job faster . . . at less cost.

**Check these time-saving,
money-saving features!**



Two hooks raise automatically behind wheels to prevent the wheels from slipping off dolly.

Pivoted roller spindles allow rocking motion to line up hub with axle.



Rear booster bar helps loosen bearings for removing wheels — also starts the brake drum into the shoe when replacing wheels.

Easily removes dual and single wheels up to 12" x 24" sizes and truck wheels up to 48" diameter.

E-Z Lift is mounted on four high-quality, easy-rolling casters, 4" in diameter.

Write for catalog or see your jobber.

THE KEN-TOOL MFG. CO.
AKRON 5, OHIO

September News Roundup

Continued from Page 238

awards, seven two-year awards, six three-year awards and three four-year awards.

Decatur Cartage Co., Chicago—to 105 drivers. Nine had safe driving records of 10 years or better.



Mack Trucks, Inc., New York City, has received an order from the Army for 129 5-ton, 6x6 cargo carriers, in addition to an earlier order for 1630 of these vehicles presently in production. It also received an order from the Corps of Engineers for seven "off-highway" trucks at a cost of \$132,340. Mack also has Defense Dept. contracts for 255 10-ton, 6x6 prime movers.

International Harvester Co., Chicago, has opened a new truck branch in Winston-Salem, N. C., and has let contracts for another new one in Richmond, Va.

Four Wheel Drive Auto Co., Clintonville, Wis., has a \$5 million order from the United States Army Corps of Engineers for 335, six-wheel drive crane carriers, which will be equipped with 20-ton cranes.

Hercules Steel Products Corp. and Central Ohio Steel Products Co. have merged. The new company will be known as Hercules Galion Products, Inc., Galion, Ohio.

Galion Allsteel Body Co., Galion, Ohio, has appointed Atlas Truck Equipment & Bus Co., Milwaukee, Wis., as hydraulic hoist and dump body distributor in Wisconsin and the upper peninsula of Michigan.

Yale & Towne Mfg. Co., Philadelphia, has opened a new sales and service branch at 4466 Woodward Ave., Detroit.

Thompson Products, Inc., has opened its new office and factory for its Valve Division at 1455 East 185th St., Cleveland, Ohio.

Galion Allsteel Body Co., Galion, Ohio, has appointed Transportation (TURN TO NEXT PAGE, PLEASE)



**IN SOME CASES
THIS LUBRICANT
TRIPLED THE
LIFE OF
WEARING PARTS**

—says EDWARDS MOTOR TRANSIT CO.
WILLIAMSPORT, PA.

"Since using LUBRIPLATE 630-AA some of our coaches have been operated in excess of 300,000 miles. None have required the rebushing of a single front end bearing. We are able to extend our lubrication schedule to every 4000 miles compared to 2000 miles with other lubricants. In some cases LUBRIPLATE has tripled the normal life of wearing parts."

**REGARDLESS OF THE SIZE AND
TYPE OF YOUR MACHINERY,
LUBRIPLATE GREASE AND
FLUID TYPE LUBRICANTS WILL
IMPROVE ITS OPERATION AND
REDUCE MAINTENANCE COSTS.**

LUBRIPLATE is available in grease and fluid densities for every purpose... LUBRIPLATE H. D. S. MOTOR OIL meets today's exacting requirements for gasoline and diesel engines.



For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK"... a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



**"BOS" HYDRAULIC
TRUCK TIRE
DEMOUNTER**

\$89.50

removes, safely
and easily, frozen
or stuck casings from
rim in minutes. Features
Hein-Werner Hydraulic unit.

Handles all size truck tires,
wheels and rims.

MAIL ORDERS OR REQUESTS FOR FURTHER
DETAILS TO

JACK P. HENNESSY SALES CO.
12 DEPOT SQUARE • ENGLEWOOD, N.J.

WOLF'S HEAD
HEAVY DUTY
MOTOR OIL
100% PURE PENNSYLVANIA

Exceeds
EVERY REQUIREMENT
FOR HEAVY DUTY OIL

WOLF'S HEAD

**MOTOR TRUCKS
CRANE CARRIERS
CUSTOM BUILT CHASSIS
GENERATOR SETS**

DUPLEX

TRUCK COMPANY
LANSING, MICHIGAN

more payload
with
Lintern

LIGHTER WEIGHT
STEP, SADDLE, &
CYLINDER TANKS

THE LINTERN CORPORATION
ROUTE 20, EAST • PAINEVILLE, OHIO

September News Roundup

Continued from Page 241

Equipment Co., East St. Louis, Mo., as its distributor in southern Illinois and eastern Missouri.

GMC Truck and Coach Division, General Motors Corp., Pontiac, Mich., has a \$5½ million U. S. Army order for standard commercial model 2½-ton stake body trucks.

Cooper Tire and Rubber Co., Findlay, Ohio, was host to 250 at its annual "Salute to the Trucking Industry." The day's schedule included a tour of the Cooper plant, a buffet luncheon, a golf tournament and a banquet.

Strick Co., Philadelphia, announces it has acquired a 10½-acre site in Los Angeles, Cal., for a new plant. Construction is expected to start before the end of next month.

END

Please Resume Reading Page 104

Classified Advertisement

WE'VE GOT 20 TRAILERS ON THE LOT—and we don't want to see them next month. Somebody's going to get a bargain out of it, because we've priced them at a sacrifice. Some brand new, some nearly new and a few in fair shape. 2,900 gal. MC-310 acid and chemical, 6,700-7,400 gal. MC-303 petro, & 5,500 gal. insulated asphalt tankers—all tandem semis. Prices range from \$2,300 to \$6,700—a price to fit your budget, no matter what your needs. Remember, some of these are BRAND NEW! Come & get 'em. Also 7.5 x 20 used rims—selling these by the armload! Write, wire, phone: REBO, Eldon Miller, Inc., Iowa City, Iowa.

KINNEAR STEEL
Rolling Doors

They save space; open straight upward. Surrounding space is always fully usable. All metal protection against fire, wind, theft. Any size, for trucks or buildings. Write.

KINNEAR
ROLLING DOORS
Saving Ways in Doorways

The KINNEAR Manufacturing Co.
2100-20 Fields Ave.
Columbus 16, Ohio

FRINK
SNO-PLOWS

Both "V" TYPE and
ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS
FROM 1½ to 10 TONS

FRINK SNO-PLOWS, INC., CLAYTON, 1000 1st, N.Y.
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

There are now
120
Water Pumps
in
our line

Wohlert
Corporation
LANSING 3 MICHIGAN

BOWERS BATTERIES

Always Better.

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

GALION
ALLSTEEL BODY CO.
GALION, OHIO

the sign of quality on

DUMP BODIES OF ALL TYPES
HYDRAULIC HOISTS
HYDRAULIC END-LOADERS
PACKER-TYPE REFUSE BODIES

THE GALION ALLSTEEL BODY COMPANY • GALION, OHIO
Division of Central Ohio Steel Products Co.

I'm young in
the car biz,
but I know
Stant ...

STANT CAPS

Used as Original Equipment
on America's Finest Automobiles

Hein-Werner
HYDRAULIC JACKS

Hein-Werner Manufactures and
sells more hydraulic jacks than any
other company in the world today!

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN